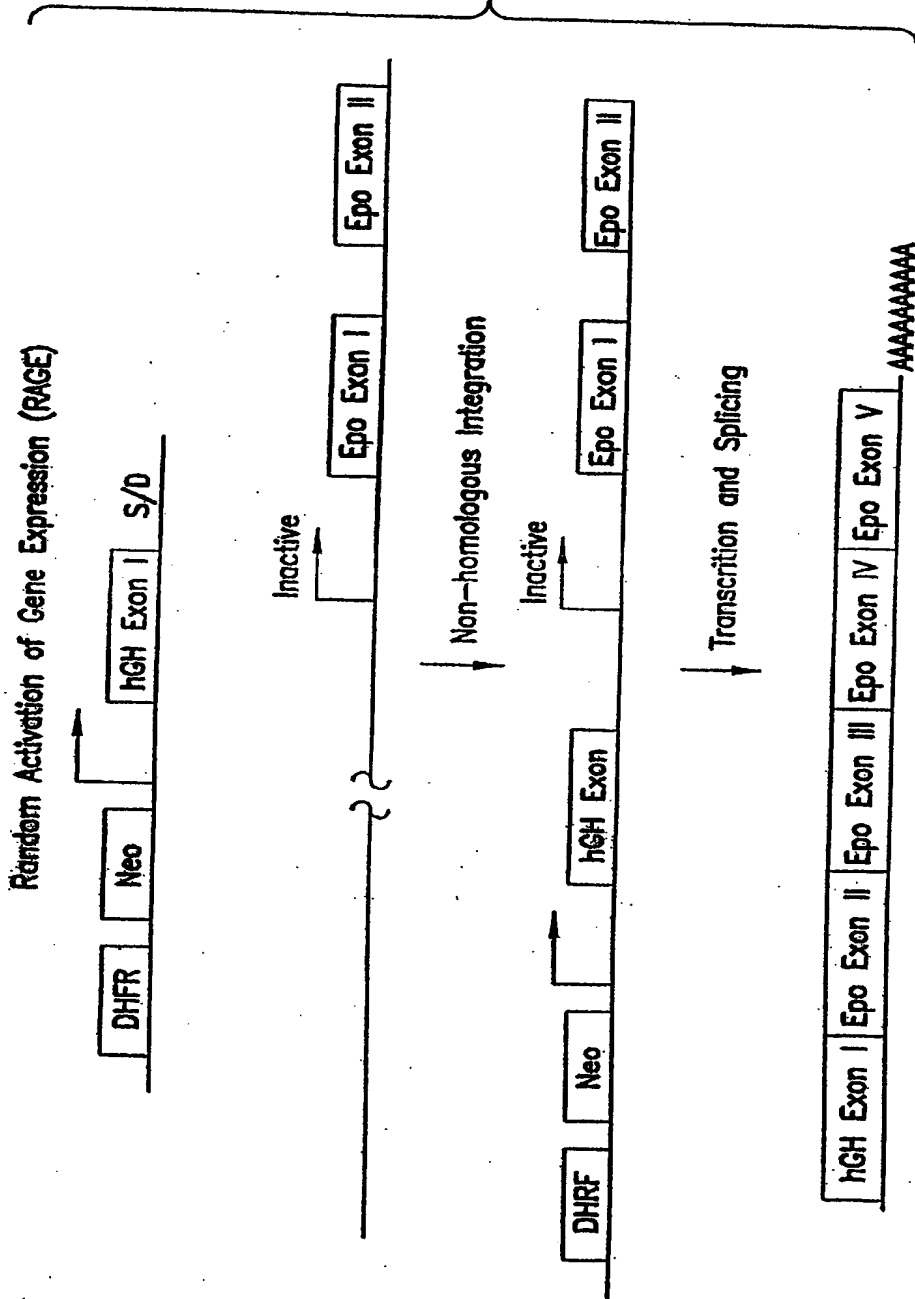




FIG. 1.



BEST AVAILABLE COPY

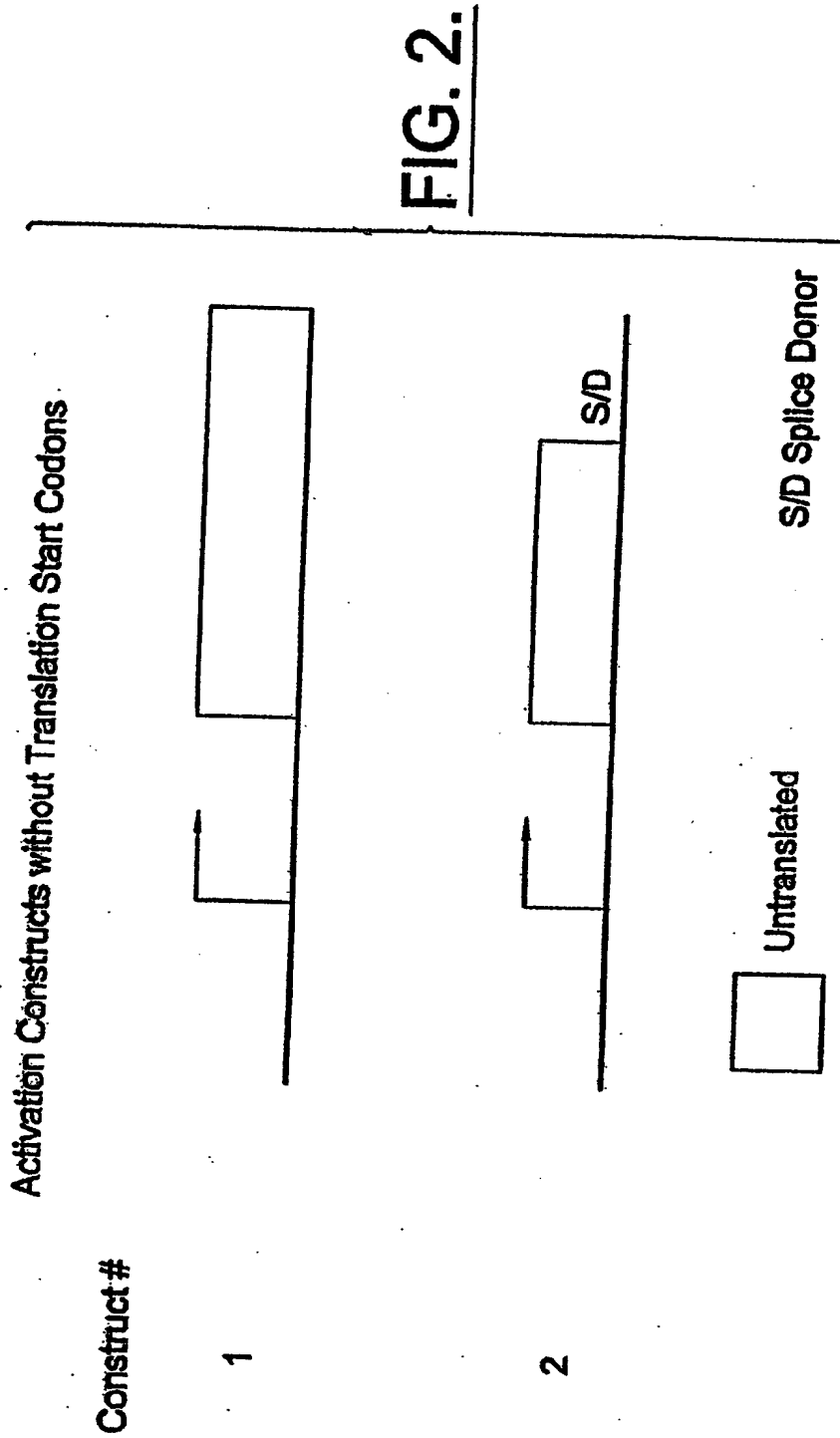
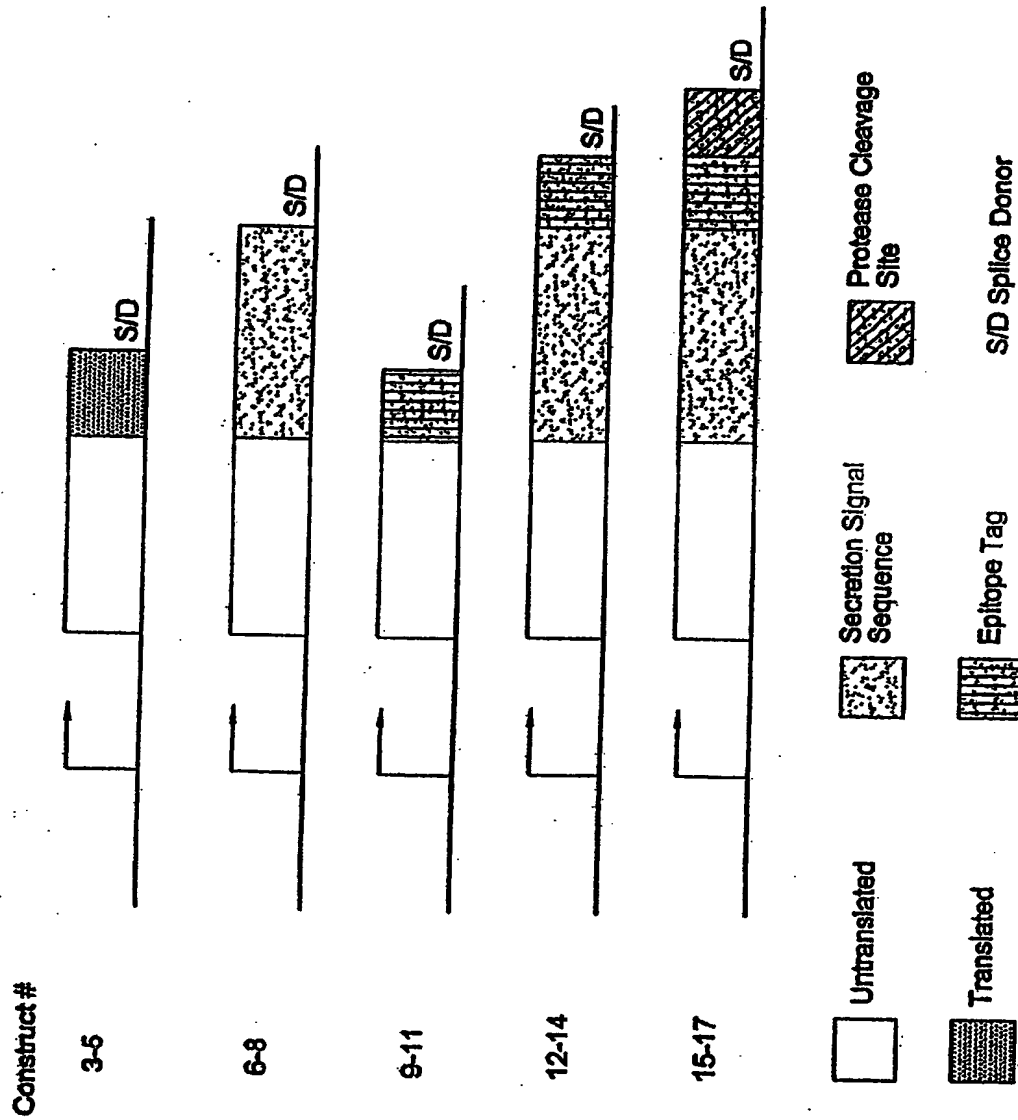


FIG. 3.



pRIG-1

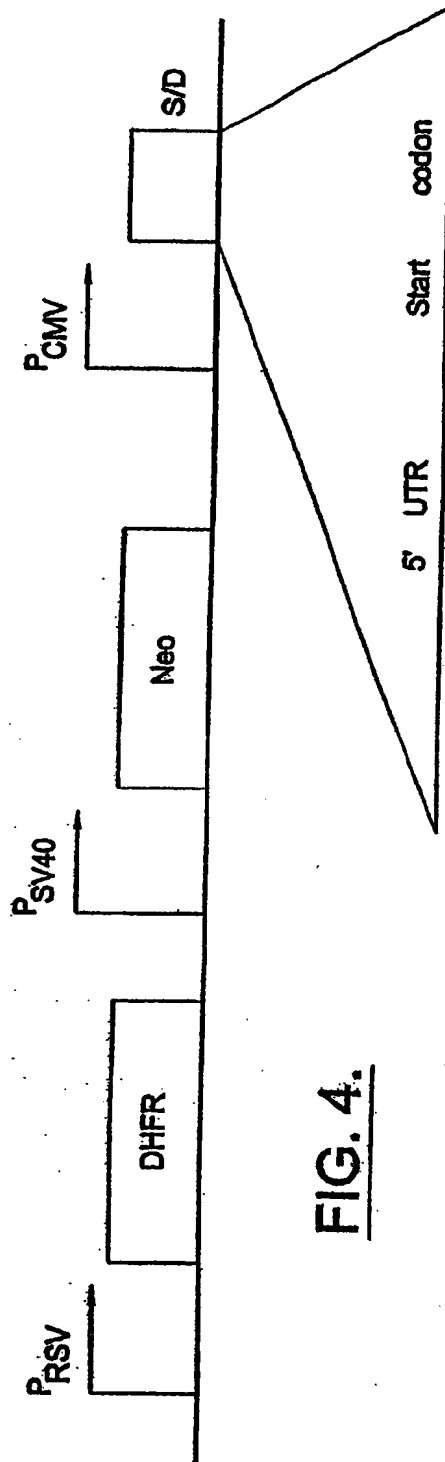


FIG. 4.



5' AGATCTTCAATATTGGCCATTAGCCATATTATTCATTGGTTATATAGCATAAATC
AATATTGGCTATTGGCCATTGCATA
CGTTGTATCTATATCATAATATGTACATTTATATTGGCTCATGTCCAATATGACCG
CCATGTTGGCATTGATTATTGACT
AGTTATTAATAGTAATCAATTACGGGGTCATTAGTTCATAGCCCATATATGGAGT
TCCGCGTTACATAACTTACGGTAA
TGGCCCGCCTGGCTGACCGCCCAACGACCCCGCCCATTGACGTCAATAATGACG
TATGTTCCCATAGTAACGCCAATAG
GGACTTTCCATTGACGTCAATGGGTGGAGTATTTACGGTAAACTGCCCACTTGGC
AGTACATCAAGTGTATCATATGCCA
AGTCCGCCCCCTATTGACGTCAATGACGGTAAATGGCCCGCCTGGCATTATGCC
AGTACATGACCTTACGGGACTTTCC
TACTTGGCAGTACATCTACGTATTAGTCATCGCTATTACCATGGTGATGCGGTTTT
GGCAGTACACCAATGGGCGTGGAT
AGCGGTTTGACTCACGGGGATTTCAGTCTCCACCCCATTGACGTCAATGGGAC
TTTGTTTTGGCACCAAATCAACGG
GACTTTCCAAAATGTCGTAACAACTGCGATCGCCCGCCCGTTGACGCAAATGGG
CGGTAGGCGTGTACGGTGGGAGGTC
TATATAAGCAGAGCTCGTTTAGTGAACCGTCAGATCACTAGAAGCTTTATTGCGG
TAGTTTATCACAGTTAAATTGCTAA
CGCAGTCAGTGCTTCTGACACAACAGTCTCGAACTTAAGCTGCAGTGACTCTCTT
AATTAAGTCCACCACTCTCACTTCA
GTTCCTTTTGCCTCCACCACTCTCACTTCAGTTCCTTTTGCATGAAGAGCTCAGAA
TCAAAAGAGGAAACCAACCCCTAA
GATGAGCTTTCCATGTAAATTTGTAGCCAGCTTCCTTCTGATTTTCAATGTTTCTT
CCAAAGGTGCAGTCTCCAAAGAGA
TTACGAATGCCTTGGAAACCTGGGGTGCCTTGGGTCAGGACATCAACTTGGACAT
TCCTAGTTTTCAAATGAGTGATGAT
ATTGACGATATAAATGGGAAAAAACTTCAGACAAGAAAAAGATTGCACAATTCA
GAAAAGAGAAAGAGACTTTCAAGGA
AAAAGATACATATAAGCTATTTAAAAATGGAACCTCTGAAAATTAAGCATCTGAAG
ACCGATGATCAGGATATCTACAAGG
TATCAATATATGATACAAAAGGAAAAAATGTGTTGGAAAAAATATTTGATTTGAA
GATTCAGAGAGGGTCTCAAAACCA
AAGATCTCCTGGACTTGTATCAACACAACCCTGACCTGTGAGGTAATGAATGGAA
CTGACCCCGAATTAAACCTGTATCA
AGATGGGAAACATCTAAACTTTCTCAGAGGGTCATCACACACAAGTGGACCACC
AGCCTGAGTGCAAATTCAAGTGCA
CAGCAGGGAACAAAGTCAGCAAGGAATCCAGTGTGAGCCTGTCAGCTGTCCAG
AGAAAGGGATCCAGGTGAGTAGGGCC
CGATCCTTCTAGAGTCGAGCTCTCTTAAGGTAGCAAGGTTACAAGACAGGTTTAA
GGAGACCAATAGAACTGGGCTTGT
CGAGACAGAGAAGACTCTTGCGTTTCTGATAGGCACCTATTGGTCTTACGCGGCC
GCGAATTCCAAGCTTGAGTATTCTA
TCGTGTCACCTAAATAACTTGGCGTAATCATGGTCATATCTGTTTCTGTGTGAA
ATTGTTATCCGCTCACAATTCCACA
CAACATACGAGCCGGAAGCATAAAGTGTAAGCCTGGGGTGCCTAATGAGTGAC
CTAACTCACATTAATTGCGTTGCGCGATGCTTCCATTTTGTGAGGGTTAATGC-

FIG. 5A.

TTCGAGAAGACATGATAAGATACATTGATGAGTTTGGACAAACCACAACAAGAAT
GCAGTGAACAAAAATGCTTTATTTGTGAAATTTGTGATGCTATTGCTTTATTTGTAA
ECATTATAAGCTGCAATAAACA
AGTTAACAACAACAATTGCATTCATTTTATGTTTCAGGTTTCAGGGGGAGATGTGG
GAGGTTTTTTAAAGCAAGTAAACC
TCTACAAATGTGGTAAAATCCGATAAGGATCGATTCCGGAGCCTGAATGGCGAAT
GGACGCGCCCTGTAGCGGCGCATTA
AGCGCGGCGGGTGTGGTGGTTACGCGCACGTGACCGCTACACTTGCCAGCGCCC
TAGCGCCCGCTCCTTTTCGCTTCTTC
CCTTCCTTTCTCGCCACGTTCCGCCGGCTTTCCCGTCAAGCTCTAAATCGGGGGG
TCCCTTTAGGGTTCCGATTTAGTGC
TTTACGGCACCTCGACCCCAAAAACTTGATTAGGGTGATGGTTCACGTAGTGGG
CCATCGCCCTGTAGACGGTTTTTC
GCCCTTTGACGTTGGAGTCCACGTTCTTTAATAGTGGACTCTTGTTCCAACTGG
AACAACACTCAACCCTATCTCGGTC
TATTCTTTTGATTTATAAGGGATTTTGGCGATTTCCGGCCTATTGGTTAAAAAATGA
GCTGATTTAACAAAAATTTAACGC
GAATTTTAACAAAAATTTAACGCTTACAATTTCCGCTGTGTACCTTCTGAGGCGG
AAAGAACCAGCTGTGGAATGTGTG
CAGTTAGGGTGTGGAAAGTCCCCAGGCTCCCCAGCAGGCAGAAGTATGCAAAGC
ATGCATCTCAATTAGTCAGCAACCAG
GTGTGGAAAGTCCCCAGGCTCCCCAGCAGGCAGAAGTATGCAAAGCATGCATCT
CAATTAGTCAGCAACCATAGTCCCGC
CCCTAACTCCGCCCATCCCGCCCTAACTCCGCCCAGTTCCGCCCATTTCTCCGCC
CCATGGCTGACTAATTTTTTTTATT
TATGCAGAGGCCGAGGCCGCTCGGCCCTCTGAGCTATTCCAGAAGTAGTGAGGA
GGCTTTTTTGGAGGCCTAGGCTTTTG
CAAAAAGCTTGATTCTTCTGACACAACAGTCTCGAACTTAAGGCTAGAGCCACCA
TGATTGAACAAGATGGATTGCACGC
AGGTTCTCCGGCCGCTTGGGTGGAGAGGCTATTCCGGCTATGACTGGGCACAACAC
ACAATCGGCTGCTCTGATGCCGCCG
TGTTCCGGCTGTCAGCGCAGGGGCGCCGGTTCTTTTTGTCAAGACCGACCTGTC
CGGTGCCCTGAATGAACTGCAGGAC
GAGGCAGCGCGGCTATCGTGGCTGGCCACGACGGGCGTTCTTGCGCAGCTGTG
CTCGACGTTGTCACTGAAGCGGGAAG
GGACTGGCTGCTATTGGGCGAAGTGCCGGGGCAGGATCTCCTGTCATCTCACCTT
GCTCCTGCCGAGAAAGTATCCATCA
TGGCTGATGCAATGCGCGGCTGCATACGCTTGATCCGGCTACCTGCCCATTCGA
CCACCAATGCGAAACATCGCATCGAG
CGAGCACGTACTCGGATGGAAGCCGGTCTTGTCGATCAGGATGATCTGGACGAA
GAGCATCAGGGGCTCGCGCCAGCCGA
ACTGTTCCGCAGGCTCAAGGCGCGCATGCCCGACGGCGAGGATCTCGTCGTGAC
CCATGGCGATGCCTGCTTGCCGAATA
TCATGGTGAAAATGGCCGCTTTTCTGGATTTCATCGACTGTGGCCGGCTGGGTGT
GGCGGACCGCTATCAGGACATAGCG
TTGGCTACCCGTGATATTGCTGAAGAGCTTGGCGGCGAATGGGCTGACCGCTTCC
TCGTGCTTTACGGTATCGCCGCTCC
CGATTGCGAGCGCATCGCCTTCTATCGCCTTCTTGACGAGTTCTTCTGAGCGGGA
CTCTGGGGTTTCAAATGACCGACCAAGCGACGCCCAACCTGCCATCACGATGGC-

FIG. 5B.

CGCAATAAAATATCTTTATTTTCATTACATCTGTGTGTTGGTTTTTGTGTGAAGA
TCCGCGTA-
TGGTGCACTCTCAGTACAATCTGCTCTGATGCCGCATAGTTAAGCCAGCCCCGAC
ACCCGCCAACAC
CCGCTGACGCGCCCTGACGGGCTTGTCTGCTCCCGGCATCCGCTTACAGACAAGC
TGTGACCGTCTCCGGGAGCTGCATG
TGTCAGAGGTTTTTACCCTCATCACCAGAAACGCGCGAGACGAAAGGGCCTCGTGA
TACGCCTATTTTTATAGGTTAATGT
CATGATAATAATGGTTTCTTAGACGTCAAGTGGCACTTTTCGGGGAAATGTGCGC
GGAACCCCTATTTGTTTATTTTTCT
AAATACATTCAAATATGTATCCGCTCATGAGACAATAACCCTGATAAATGCTTCA
ATAATATTGAAAAGGAAGAGTATG
AGTATTCAACATTTCCGTGTGCGCCCTATTCCCTTTTTTGCGGCATTTTGCCTTCC
TGTTTTTGTCTACCCAGAAACGCT
GGTGAAAGTAAAAGATGCTGAAGATCAGTTGGGTGCACGAGTGGGTACATCGA
ACTGGATCTCAACAGCGGTAAGATCC
TTGAGAGTTTTCGCCCCGAAGAACGTTTTCCAATGATGAGCACTTTTAAAGTTCT
GCTATGTGGCGCGGTATTATCCCGT
ATTGACGCGCGGCAAGAGCAACTCGGTGCGCGCATACACTATTCTCAGAATGACT
TGGTGAGTACTCACCAGTCACAGA
AAAGCATCTTACGGATGGCATGACAGTAAGAGAATTATGCAGTGCTGCCATAACC
ATGAGTGATAACACTGCGGCCAACT
TACTTCTGACAACGATCGGAGGACCGAAGGAGCTAACCGCTTTTTTGCACAACAT
GGGGGATCATGTAACTCGCCTTGAT
CGTTGGGAACCGGAGCTGAATGAAGCCATACCAAACGACGAGCGTGACACCAGC
ATGCCTGTAGCAATGGCAACAACGTT
GCGCAAACTATTAAGTGGCGAACTACTTACTCTAGCTTCCCGGCAACAATTAATA
GACTGGATGGAGGCGGATAAAGTTG
CAGGACCACTTCTGCGCTCGGCCCTTCCGGCTGGCTGGTTTATTGCTGATAAATC
TGGAGCCGGTGAGCGTGGGTCTCGC
GGTATCATTGCAGCACTGGGGCCAGATGGTAAGCCCTCCCGTATCGTAGTTATCT
ACACGACGGGGAGTCAGGCAACTAT
GGATGAACGAAATAGACAGATCGCTGAGATAGGTGCCTCACTGATTAAGCATTGG
TAACTGTCAGACCAAGTTTACTCAT
ATATACTTTAGATTGATTTAAACTTCATTTTTTAATTTAAAGGATCTAGGTGAAG
ATCCTTTTTGATAATCTCATGACC
AAAATCCCTTAACGTGATTTTCGTTCCACTGAGCGTCAGACCCCGTAGAAAAGA
TCAAAGGATCTTCTTGAGATCCTTT
TTTTCTGCGCGTAATCTGCTGCTTGCAAACAAAAAACCACCGCTACCAGCGGTG
GTTTGTGTTGCCGGATCAAGAGCTAC
CAACTCTTTTTCCGAAGGTAAGTGGCTTCAGCAGAGCGCAGATACCAAATACTGT
CCTTCTAGTGTAGCCGTAGTTAGGC
CACCACCTCAAGAACTCTGTAGCACCAGCTACATACCTCGCTCTGCTAATCCTGT
TACCAGTGGCTGCTGCCAGTGGCGA
TAAGTCGTGCTTACCGGGTTGGACTCAAGACGATAGTTACCGGATAAGGCGCAG
CGGTCCGGCTGAACGGGGGGTTCGT
GCACACAGCCAGCTTGGAGCGAAGCAGCTACACCGAACTGAGATACCTACAGC
GTGAGCTATGAGAAAGCGCCACGCTT
CCCGAAGGGAGAAAGGCGGACAGGTATCCGGTAAGCGGCAGGGTCGGAACAGG-

FIG. 5C.

AGAGCGCACGAGGGAGCTTCCAGGGGGAACGCCTGGTATCTTTATAGTCCTGTC
GGGTTTCGCCACCTCTGACTTGAGCGTCGATTTTTGTGATGCTCGTCAGGGG
GGCGGAGCCTATGGAAAAACGCCAGCAACGCGGCCTTTTACGGTTCCTGGCCTT
TTGCTGGCCTTTTGCTCACATGGCT
CGAC3'

FIG. 5D.

5AGATCTTCAATATTGGCCATTAGCCATATTATTCATTGGTTATATAGCATAAATC
AATATTGGCTATTGGCCATTGCAT
ACGTTGTATCTATATCATAATATGTACATTTATATTGGCTCATGTCCAATATGACC
GCCATGTTGGCATTGATTATTGAC
TAGTTATTAATAGTAATCAATTACGGGGTCATTAGTTCATAGCCCATATATGGAC
TTCCGCGTTACATAAAGTACGGTAA
ATGGCCCGCCTGGCTGACCGCCCAACGACCCCGCCCATTTGACGTCAATAATGAC
GTATGTTCCCATAGTAACGCCAATA
GGGACTTTCCATTGACGTCAATGGGTGGAGTATTTACGGTAAACTGCCCACTTGG
CAGTACATCAAGTGTATCATATGCC
AAGTCCGCCCCCTATTGACGTCAATGACGGTAAATGGCCCGCCTGGCATTATGCG
CAGTACATGACCTTACGGGACTTTC
CTACTTGGCAGTACATCTACGTATTAGTCATCGCTATTACCATGGTGATGCGGTT
TTGGCAGTACACCAATGGGCGTGGA
TAGCGGTTTGACTCACGGGGATTTCGAAGTCTCCACCCCATTTGACGTCAATGGGA
GTTTGTGTTTGGCACCAAAATCAACG
GGACTTTCCAAAATGTCGTAACAACCTGCGATCGCCCGCCCGTTGACGCAAATGG
GCGGTAGGCGGTGACGGTGGGAGGT
CTATATAAGCAGAGCTCGTTTAGTGAACCGTCAGATCACTAGAAGCTTTATTGCG
GTAGTTTATCACAGTTAAATTGCTA
ACGCAGTCAGTGCTTCTGACACAACAGTCTCGAACTTAAGCTGCAGTGAAGTCTCT
TAATTAAGTCCACCAAGTCTCACTT
AGTTCCTTTTGCCTCCACCAAGTCTCACTTCAAGTTCCTTTTGCATGAAGAGCTAGA
ATCAAAAGAGGAAACCAACCCCTA
AGATGAGCTTTCCATGTAAATTTGTAGCCAGCTTCCTTCTGATTTTCAATGTTTCT
TCCAAAGGTGCAGTCTCCAAAGAG
ATTACGAATGCCTTGGAAACCTGGGGTGCCTTGGGTGAGGACATCAACTTGGACA
TTCCCTAGTTTTCAAAATGAGTGATGA
TATTGACGATATAAAATGGGAAAAAATTCAGACAAGAAAAAGATTGCACAATTC
AGAAAAGAGAAAGAGACTTTCAAGG
AAAAAGATACATATAAGCTATTTAAAAATGGAAGTCTGAAAATTAAGCATCTGAA
GACCGATGATCAGGATATCTACAAG
GTATCAATATATGATACAAAAGGAAAAAATGTGTTGGAAAAAATATTTGATTGGA
AGATTCAAGAGAGGGTCTCAAAACC
AAAGATCTCCTGGACTTGTATCAACACAACCCCTGACCTGTGAGGTAATGAATGGA
ACTGACCCCGAATTAACCTGTATC
AAGATGGGAAACATCTAAACTTTCTCAGAGGGTCATCACACACAAGTGGACCAC
CAGCCTGAGTGCAAAATTCAAGTGC
ACAGCAGGGAACAAAGTCAGCAAGGAATCCAGTGTGAGCCTGTGAGCTGTCCA
GAGAAAGGGATCCCAGGTGAGTAGGG
CCCGATCCTTCTAGAGTCGAGCTCTCTTAAGGTAGCAAGGTTACAAGACAGGTTT
AAGGAGACCAATAGAAACTGGGCTT
GTCGAGACAGAGAAGACTCTTGCGTTTCTGATAGGCACCTATTGGTCTTACGCGG
CCGCGAATTCGAAGCTTGAGTATTC
TATCGTGTACCTAAATAACTTGGCGTAATCATGGTCATATCTGTTTCTGTGTGA
AATTGTTATCCGCTCACAATTCCA
CACACATACGAGCCGGAAGCATAAAGTGTAAGCCTGGGGTGCCTAATGAGTG
AGCTAACTCACATTAATTGCGTTGCG
CGATGCTTCCAATTTTGTGAGGGTAAATGCTTCGAGAAGACATGATAAGATACATT
GATGAGTTTGGACAAACCACAACAAGAATGCAGTGAAAAAATGCTTTATTTGT-

FIG. 6A.

GAAATTTGTGATGCTATTGCTTTATTTGTAACCATTATAAGCTGCAATAAA
CAAGTTAACAACAACAATTGCATTCAATTTATGTTTCAGGTTTCAGGGGGAGATGT
GGGAGGTTTTTTTAAAGCAAGTAAA
CCTCTACAAATGTGGTAAATCCGATAAGGATCGATTCCGGAGCCTGAATGGCGA
ATGGACGCGCCCTGTAGCGGCGCAT
TAAGCGCGGGGGTGTGGTGGTTACGCGCACGTGACCGCTACACTTGCCAGCGC
CCTAGCGCCCGCTCCTTTTCGCTTTCT
TCCCTTCCTTTCTCGCCACGTTTCGCCGGCTTTCCCGTCAAGCTCTAAATCGGGG
GCTCCCTTTAGGGTTCCGATTTAGT
GCTTTACGGCACCTCGACCCCAAAAACTTGATTAGGGTGATGGTTCACGTAGTG
GGCCATCGCCCTGATAGACGGTTTT
TCGCCCTTTGACGTTGGAGTCCAGTTCTTTAATAGTGGACTCTTGTTCCAACTG
GAACAACACTCAACCCTATCTCG
TCTATTCTTTTGATTTATAAGGGATTTTGCCGATTTCCGGCCTATTGGTTAAAAAT
GAGCTGATTTAACAATAATTTAAC
GCGAATTTTAACAAAATATTAACGCTTACAATTTCCGCTGTGTACCTTCTGAGGC
GGAAAGAACCAGCTGTGGAATGTGT
GTCAGTTAGGGTGTGGAAAGTCCCCAGGCTCCCCAGCAGGCAGAAAGTATGCAAA
GCATGCATCTCAATTAGTCAGCAACC
AGGTGTGGAAAGTCCCCAGGCTCCCCAGCAGGCAGAAAGTATGCAAAGCATGCAT
CTCAATTAGTCAGCAACCATAGTCCC
GCCCCTAACCTCCGCCCATCCCGCCCTAACTCCGCCCAGTTCCGCCCATTTCTCCG
CCCCATGGCTGACTAATTTTTTTTA
TTTATGCAGAGGCCGAGGCCGCTCGGCCCTCTGAGCTATTCCAGAAGTAGTGAGG
AGGCTTTTTTGGAGGCCCTAGGCTTT
TGCAAAAAGCTTGATTCTTCTGACACAACAGTCTCGAACTTAAGGCTAGAGCCAC
CATGATTGAACAAGATGGATTGCAC
GCAGGTTCTCCGGCCGCTTGGGTGGAGAGGCTATTCCGGCTATGACTGGGCACAAC
AGACAATCGGCTGCTCTGATGCCGC
CGTGTTCCGGCTGTGAGCGCAGGGGCGCCCGGTTCTTTTTGTCAAGACCGACCTG
TCCGGTGGCCTGAATGAACTGCAGG
ACGAGGCAGCGCGGCTATCGTGGCTGGCCACGACGGGCGTTCTTGGCGAGCTG
TGCTCGACGTTGTCACTGAAGCGGGA
AGGGACTGGCTGCTATTGGGCGAAGTGCCGGGGCAGGATCTCCTGTCATCTCACC
TTGCTCCTGCCGAGAAAGTATCCAT
CATGGCTGATGCAATGCGGCGGCTGCATACGCTTGATCCGGCTACCTGCCCATTC
GACCACCAAGCGAAACATCGCATCG
AGCGAGCACGTACTCGGATGGAAGCCGGTCTTGTGATCAGGATGATCTGGACG
AAGAGCATCAGGGGCTCGCGCCAGCC
GAACTGTTCCGCCAGGCTCAAGGCGCGCATGCCCGACGGCGAGGATCTCGTCGTG
ACCCATGGCGATGCCTGCTTGCCGAA
TATCATGGTGGAAAATGGCCGCTTTTCTGGATTCATCGACTGTGGCCGGCTGGGT
GTGGCGGACCGCTATCAGGACATAGCGTTGGCTACCCGTGATATTGCTGAAGAGC
TTGGCGGCGAATGGGCTGACCGCTTCTCGTGCTTTACGGTATCGCCGCT
CCCGATTGCGAGCGCATCGCCTTCTATCGCCTTCTTGACGAGTTCTTCTGAGCGG
GACTCTGGGGTTCGAAATGACCGAC
CAAGCGAGCCCAACCTGCCATCAGGATGGCCGCAATAAAATATCTTTATTTTCA
TTACATCTGTGTGTTGGTTTTTGT
GTGAAGATCCGCGTATGGTGAAGTCTCAGTACAATCTGCTCTGATGCCGCATAGT
TAAGCCAGCCCCGACACCCGCCAACACCCGCTGACGCGCCCTGACGGGCT-

FIG. 6B.

TGTCTGCTCCCGGCATCCGCTTACAGACAAGCTGTGACCGTCTCCGGGAGCTGCA
 TGTGTCAGAGGTTTTTACCCTCATCACCGAAACGCGCGAGACGAAAGGGCCTCGT
 GATACGCCTATTTTTATAGGTTAAT
 GTCATGATAATAATGGTTTTCTTAGACGTGAGGTGGCACTTTTCGGGGAAATGTGC
 GCGGAACCCCTATTTGTTTTATTTT
 CTAATAACATTCAAATATGTATCCGCTCATGAGACAATAACCCTGATAAATGCTT
 CAATAATATTGAAAAAGGAAGAGTA
 TGAGTATTCAACATTTCCGTGTGCGCCTTATTCCCTTTTTTTCGGGCATTTTGCCTT
 CCTGTTTTTGGCTCACCCAGAAACG
 CTGGTGAAAGTAAAAGATGCTGAAGATCAGTTGGGTGCACGAGTGGGTACATC
 GAACTGGATCTCAACAGCGGTAAAGAT
 CCTTGAGAGTTTTTCGCCCCGAAGAAGCTTTTCCAATGATGAGCACTTTTAAAGTT
 CTGCTATGTGGCGCGGTATTATCCC
 GTATTGACGCCCGGCAAGAGCAAGTCCGGTCGCCGCATACACTATTCTCAGAATGA
 CTTGGTTGAGTACTCACCAGTCACA
 GAAAGCATCTTACGGATGGCATGACAGTAAGAGAATTATGCAGTGTGCCATAA
 CCATGAGTGATAACACTGCGGCCAA
 CTTACTTCTGACAACGATCGGAGGACCGAAGGAGCTAACCCTTTTTTGCACAAC
 ATGGGGGATCATGTAACCTCGCCTTG
 ATCGTTGGGAACCGGAGCTGAATGAAGCCATACCAAACGACGAGCGTGACACCA
 CGATGCCGTGTAGCAATGGCAACAACG
 TTGCGCAAACTATTAAGTGGCGAACTACTTACTCTAGCTTCCCGGCAACAATTAA
 TAGACTGGATGGAGGCGGATAAAGT
 TGCAGGACCACTTCTGCGCTCGGCCCTTCCGGCTGGCTGGTTTATTGCTGATAAA
 TCTGGAGCCGGTGAGCGTGGGTCTC
 GCGGTATCATTGCAGCACTGGGGCCAGATGGTAAGCCCTCCCGTATCGTAGTTAT
 CTACACGACGGGGAGTCAGGCAACT
 ATGGATGAACGAATAGACAGATCGCTGAGATAGGTGCCTCACTGATTAAGCATT
 GGTAACCTGTGACACCAAGTTTACTC
 ATATATACTTTAGATTGATTTAAACTTTCATTTTAAATTTAAAGGATCTAGGTGA
 AGATCCTTTTTTGATAATCTCATGA
 CCAAAATCCCTTAACGTGAGTTTTTCGTTCCACTGAGCGTCAGACCCCGTAGAAAA
 GATCAAAGGATCTTCTTGAGATCCT
 TTTTTTCTGCGCGTAATCTGCTGCTTGCAAAACAAAAAACACCGCTACCAGCGG
 TGGTTTTGTTTGGCGGATCAAGAGCT
 ACCAACTCTTTTTTCEGAAGGTAAGTGGCTTCAGCAGAGCGCAGATACCAAATACT
 GTCCTTCTAGTGTAGCCGTAGTTAG
 GCCACCACTTCAAGAACTCTGTAGCACCGCCTACATACCTCGCTCTGCTAATCCT
 GTTACCACTGGCTGCTGCCAGTGGCGATAAGTCTGTCTTACCGGGTTGGACTCA
 AGACGATAGTTACCGGATAAGGCGCAGCGGTCCGGCTGAACGGGGGGTTC
 GTGCACACAGCCCAGCTTGGAGCGAACGACCTACACCGAACTGAGATACCTACA
 GCGTGAGCTATGAGAAAGCGCCACGC
 TTCCCGAAGGGAGAAAGGCGGACAGGTATCCGGTAAGCGGCAGGGTCGGAACAG
 GAGAGCGCACGAGGGAGCTTCCAGGG
 GGAAACGCCCTGGTATCTTTATAGTCTGTGCGGTTTCGCCACCTCTGACTTGAGC
 GTCGATTTTGTGATGCTCGTCAGG
 GGGGCGGAGCCTATGGAAAAACGCCAGCAACGCGGCCTTTTACGGTTCCTGGC
 CTTTGTGCTGGCCTTTTGTCTCACATGG
 CTCGAC3'

FIG. 6C.

SAGATCTTCAATATTGGCCATTAGCCATATTATTCATTGGTTATATAGCATAAATC
AATATTGGCTATTGGCCATTGCAT
ACGTTGTATCTATATCATATATGTACATTTATATTGGCTCATGTCCAATATGACC
GCCATGTTGGCATTGATTATTGAC
TAGTTATTAATAGTAATCAATTACGGGGTCATTAGTTCATAGCCCATATATGGAG
TTCCGCGTTACATAACTTACGGTAA
ATGGCCCGCCTGGCTGACCGCCCAACGACCCCGCCCATTGACGTCAATAATGAC
GTATGTTCCCATAGTAACGCCAATA
GGGACTTTCCATTGACGTCAATGGGTGGAGTATTTACGGTAAACTGCCCACTTGG
CAGTACATCAAGTGTATCATATGCC
AAGTCCGCCCCCTATTGACGTCAATGACGGTAAATGGCCCGCCTGGCATTATGCC
CAGTACATGACCTTACGGGACTTTC
CTACTTGGCAGTACATCTACGTATTAGTCATCGCTATTACCATGGTGATGCGGTT
TTGGCAGTACACCAATGGGCGTGGA
TAGCGGTTTGACTCACGGGGATTTCGAAGTCTCCACCCCATTGACGTCAATGGGA
GTTTGTGTTTGGCACCAAAATCAACG
GGACTTTCCAAATGTCGTAACAACTGCGATCGCCCGCCCGTTGACGCAAATGG
GCGGTAGGCGTGTACGGTGGGAGGT
CTATATAAGCAGAGCTCGTTTAGTGAACCGTCAGATCACTAGAAGCTTTATTGCG
GTAGTTTATCACAGTTAAATTGCTA
ACGCAGTCAGTGCTTCTGACACAACAGTCTCGAACTTAAGCTGCAGTGACTCTCT
TAATTAACCTCCACAGTCTCACTTC
AGTTCCTTTTGCCTCCACAGTCTCACTTCAGTTCCTTTTGCATGAAGAGCTCAGA
ATCAAAAGAGGAAACCAACCCCTA
AGATGAGCTTTCATGTAAATTTGTAGCCAGCTTCCTTCTGATTTTCAATGTTTCT
TCCAAAGGTGCAGTCTCCAAAGAG
ATTACGAATGCCTTGGAAACCTGGGGTGCCTTGGGTGACGACATCAACTTGGACA
TTCCTAGTTTTCAAATGAGTGATGA
TATTGACGATATAAAATGGGAAAAAATTCAGACAAGAAAAAGATTGCACAATTC
AGAAAAGAGAAAGAGACTTTCAAGG
AAAAAGATACATATAAGCTATTTAAAAATGGAACCTGAAAAATTAAGCATCTGAA
GACCGATGATCAGGATATCTACAAG
GTATCAATATATGATACAAAAGGAAAAATGTGTTGGAAAAAATATTTGATTGA
AGATTCAAGAGAGGGTCTCAAAACC
AAAGATCTCCTGGACTTGTATCAACACAACCTGACCTGTGAGGTAATGAATGGA
ACTGACCCCGAATTAAACCTGTATC
AAGATGGGAAACATCTAAACTTTCTCAGAGGGTCATCACACACAAGTGGACCAC
CAGCCTGAGTGCAAAATTCAGTGC
ACAGCAGGGAACAAAGTCAGCAAGGAATCCAGTGTGAGCCTGTGAGCTGTCCA
GAGAAAGGGATCCACAGGTGAGTAGG
GCCCGCTCCTTCTAGAGTCGAGTCTCTTAAGGTAGCAAGGTTACAAGACAGGTT
TAAGGAGACCAATAGAACTGGGCT
TGTCGAGACAGAGAAGACTTTGCGTTTCTGATAGGCACCTATTGGTCTTACGCG
GCCGCGAATTCCAAGCTTGAGTATT
CTATCGTGTACCTAAATAACTTGGCGTAATCATGGTCATATCTGTTTCCTGTGTG
AAATTGTTATCCGCTCACAATTCC
ACACAACATACGAGCCGGAAGCATAAAGGTAAAGCCTGGGGTGCCTAATGAGT
GAGCTAACTCACATTAATTGCGTTGC
GCGATGCTTCCATTTTGTGAGGGTTAATGCTTCGAGAAGACATGATAAGATACAT
TGATGAGTTTGGACAAACCACAACAAGATGCAGTGAAAAAATGC-

FIG. 7A.

TTTATTTGTGAAATTTGTGATG
CTATTGCTTTATTTGTAACCATTATAAGCTGCAATAA
ACAAGTTAACAACAACAATTGCATTCTTTATGTTTCAGGTTTCAGGGGGAGATG
TGGGAGGTTTTTAAAGCAAGTAAA
ACCTCTACAAATGTGGTAAAATCCGATAAGGATCGATTCCGGAGCCTGAATGGCG
AATGGACGCGCCCTGTAGCGGCGCA
TTAAGCGCGGCGGGTGTGGTGGTTACGCGCACGTGACCGCTACACTTGCCAGCGC
CCTAGCGCCCGCTCCTTTTCGCTTTC
TTCCCTTCCTTTCTCGCCACGTTCCGCGGCTTTCCCGTCAAGCTCTAAATCGGGG
GCTCCCTTTAGGGTTCGATTTAG
TGCTTTACGGCACCTCGACCCCAAAACTTGATTAGGGTGATGGTTCACGTAGT
GGGCCATCGCCCTGATAGACGGTTT
TTCCGCTTTGACGTTGAGTCCACGTTCTTTAATAGTGGACTCTTGTTCAAACT
GGAACAACACTCAACCCTATCTCG
GTCTATTCTTTTGATTTATAAGGGATTTTGGCGATTTCGGCCTATTGGTTAAAAAA
TGAGCTGATTTAACAATAATTAA
CGCGAATTTAACAATAATTAACGCTTACAATTCGCCTGTGTACCTTCTGAGG
CGGAAAGAACCAGCTGTGGAATGTG
TGTCAGTTAGGGTGTGGAAAGTCCCCAGGCTCCCCAGCAGGCAGAAGTATGCAA
AGCATGCATCTCAATTAGTCAGCAAC
CAGGTGTGGAAAGTCCCCAGGCTCCCCAGCAGGCAGAAGTATGCAAAGCATGCA
TCTCAATTAGTCAGCAACCATAGTCC
CGCCCTTAACCTCCGCCATCCCGCCCTAATCCGCCAGTTCCGCCATTCTCC
GCCCATGGCTGACTAATTTTTTT
ATTTATGCATGAGGCGAGGCGCGCTCGGCTCTGAGCTATTCCAGAAGTAGTGAG
GAGGCTTTTGGAGGCTAGGCTT
TTGCAAAAAGCTTGATTCTTCTGACACAACAGTCTCGAACTTAAGGCTAGAGCCA
CCATGATTGAACAAGATGGATTGCA
CGCAGGTTCTCCGCCGCTTGGGTGGAGAGGCTATTCCGGCTATGACTGGGCACAA
CAGACAATCGGCTGCTCTGATGCCG
CCGTGTCCGGCTGTGAGCGCAGGGGGCGCCGGTCTTTTTGTCAAGACCGACCT
GTCCGGTGCCCTGAATGAAGTGCAG
GACGAGGCAGCGCGCTATCGTGGCTGGCCACGACGGGCGTTCTTGCGCAGCT
GTGCTCGACGTTGTCACTGAAGCGGG
AAGGGACTGGCTGCTATTGGGCGAAGTGCCGGGGCAGGATCTCCTGTCTATCTCAC
CTTGCTCCTGCCGAGAAAGTATCCA
TCATGGCTGATGCAATCGGGCGCTGCATACGCTTGATCCGGCTACCTGCCCCATT
CGACCACCAAGCGAAACATCGCATC
GAGCGAGCACGTACTCGGATGGAAGCCGGTCTTGTGATCAGGATGATCTGGAC
GAAGAGCATCAGGGGCTCGCGCCAGC
CGAAGTGTTCGCCAGGCTCAAGGCGCGCATGCCGACGGCGAGGATCTCGTCGT
GAACCATGGCGATGCCGTGCTTGCCGA
ATATCATGGTGGAAATGGCCGCTTTTCTGGATTATCATGATGTGGCCGGCTGGG
TGTGGCGGACGCTATCAGGACATA
GCGTTGGCTACCGTGATATTGCTGAAGAGCTTGGCGGCAATGGGCTGACCGCT
TCCTCGTGCTTTACGGTATCGCCG
TCCCGATTCCGAGCGCATCGCCTTCTATCGCCTTCTTGACGAGTTCTTCTGAGCC
GGACTCTGGGGTTGAAATGACCGA
CCAAGCGACGCGCAACCTGCCATCAGATGGCCGCAATAAAATATCTTTATTTTC
ATTACATCTGTGTGTTGGTTTTTGTGAAGATCCGCGTATGGTGCACTCTC-

FIG. 7B.

AGTACAATCTGCTCTGATGCCGCATAGTTAAGCCAGCCCCGACACCCGCCAA
CACCCGCTGACGCGCCCTGACGGGCTTGTCTGCTCCCGGCATCCGCTTACAGACA
AGCTGTGACCGTCTCCGGGAGCTGC
ATGTGTCAGAGGTTTTACCGTCATCACCAGAACGCGCGAGACGAAAGGGCCTCG
TGATACGCCCTATTTTTATAGGTTAA
TGTCATGATAATAATGGTTTCTTAGACGTCAGGTGGCACTTTTCGGGGAAATGTG
CGCGGAACCCCTATTTGTTTTATTTT
TCTAAATACATTCAAATATGTATCCGCTCATGAGACAATAACCCGTATAAATGCT
TCAATAATATTGAAAAAGGAAGT
ATGAGTATTCAACATTTCCGTGTCCGCTTATTCCCTTTTTTTCGGGCATTTTGCCT
TCTGTTTTTGTCTACCCAGAAAC
GCTGGTGAAAGTAAAAGATGCTGAAGATCAGTTGGGTGCACGAGTGGGTTACAT
CGAACTGGATCTCAACAGCGTAAGA
TCCTTGAGAGTTTTCGCCCCGAAGAACGTTTTCCAATGATGAGCACTTTTAAAGT
TCTGCTATGTGGCGCGGTATTATCC
CGTATTGACGCCGGGAAGAGCAACTCGGTGCGGCATACACTATTCTCAGAATG
ACTTGGTTGAGTACTCACCAGTCAC
AGAAAGCATCTTACGGATGGCATGACAGTAAGAGAATTATGCAGTGCTGCCATA
ACCATGAGTGATAACACTGCGGCCA
ACTTACTTCTGACAACGATCGGAGGACCGAAGGAGCTAACCGCTTTTTTGACAA
CATGGGGGATCATGTAACTCGCCTT
GATCGTTGGGAACCGGAGCTGAATGAAGCCATACCAAACGACGAGCGTGACACC
ACGATGCCTGTAGCAATGGCAACAAC
GTTGCGCAACTATTAAGTGGCGAACTACTTACTCTAGCTTCCCGGCAACAATTA
ATAGACTGGATGGAGGCGGATAAG
TTGCAGGACCACTTCTGCGCTCGGCCCTTCCGGCTGGCTGGTTTATTGCTGATAA
ATCTGGAGCGGTGAGCGTGGGTCT
CGCGGTATCATTTGACGACTGGGGCCAGATGGTAAGCCCTCCCGTATCGTAGTTA
TCTACACGACGGGGAGTCAGGCAAC
TATGGATGAACGAAATAGACAGATCGCTGAGATAGGTGCCTCACTGATTAAAGCAT
TGGTAAGTGTGACACCAAGTTTACT
CATATATACTTTAGATTGATTTAAACTTCATTTTTAATTTAAAGGATCTAGGTG
AAGATCCTTTTTTGATAATCTCATG
ACCAAAATCCCTTAACGTGAGTTTTCGTTCCACTGAGCGTCAGACCCCGTAGAAA
AGATCAAAGGATCTTCTTGAGATCC
TTTTTTTCTGCGCTAATCTGCTGCTTGCAAACAAAAAACACCGCTACCAGCG
GTGGTTTGTFTGCGGGATCAAGAGC
TACCAACTCTTTTTCCGAAGGTAAGTGGCTTCAGCAGAGCGCAGATACCAAATAC
TGTCCTTCTAGTGTAGCCGTAGTTA
GGCCACCACTTCAAGAACTCTGTAGCAACCGCTACATACCTCGCTCTGCTAATCC
TGTTACCAAGTGGCTGCTGCCAGTGG
CGATAAGTCTGTCTTACCGGTTGGACTCAAGACGATAGTTACCGGATAAGGCG
CAGCGGTCCGGCTGAACGGGGGTT
CGTGACACAGCCAGCTTGGAGCGAACGACCTACACCGAACTGAGATACCTAC
AGCGTGAGCTATGAGAAAGCGCCACGCTTCCGAAGGGAGAAAGGCGGACAGGT
ATCCGGTAAGCGGCAGGGTCGGAACAGGAGAGCGCAGGAGGAGCTTCCAGG
GGGAAACGCCCTGGTATCTTTATAGTCTGTGCGGTTTCGCCACCTCTGACTTGAG
CGTCGATTTTTGTGATGCTCGTCAG
GGGGGCGGAGCCTATGGAAAAACGCCAGCAACGCGGCCTTTTTACGGTTCTCGG
CCTTTTGCTGGCCTTTTGCTCACATGGCTCGAC3'

FIG. 7C.

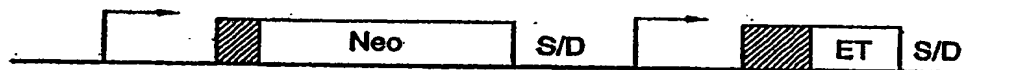
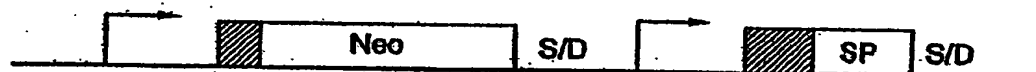
FIG. 8A.FIG. 8B.FIG. 8C.FIG. 8D.FIG. 8E.FIG. 8F.

FIG. 9A.



FIG. 9B.



FIG. 9C.



FIG. 9D.

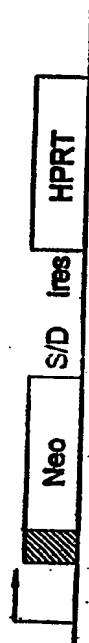
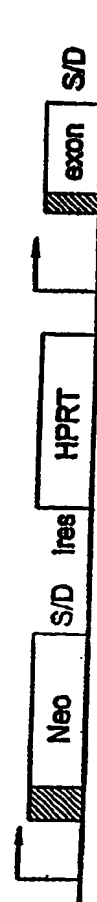
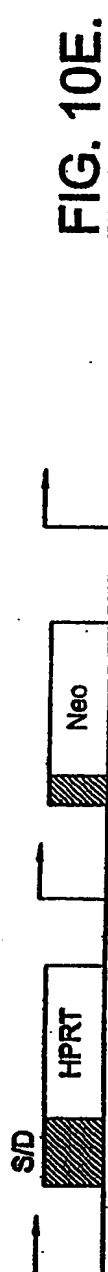
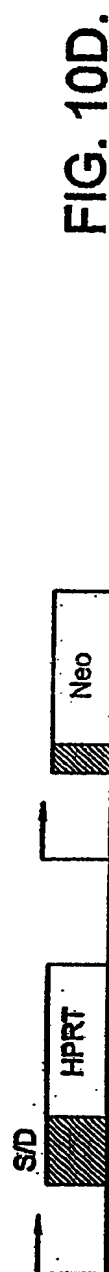
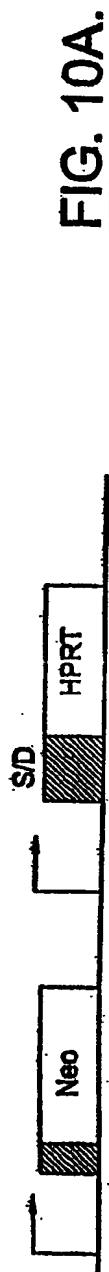


FIG. 9E.



FIG. 9F.





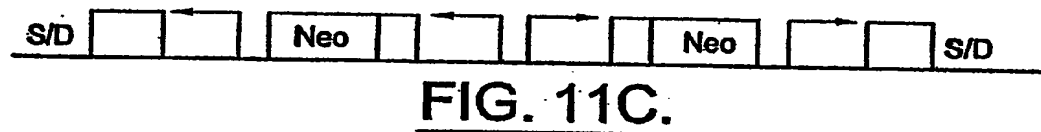
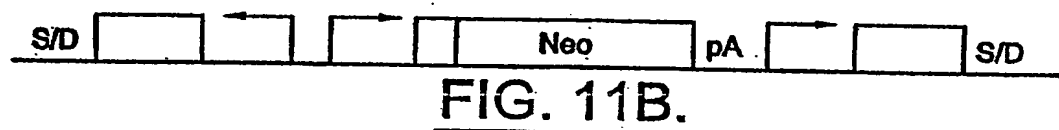
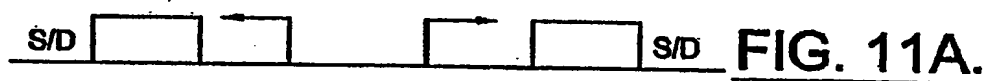




FIG. 12A.



FIG. 12B.



FIG. 12C.

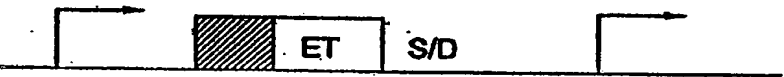


FIG. 12D.



FIG. 12E.

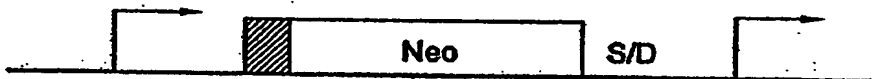


FIG. 12F.

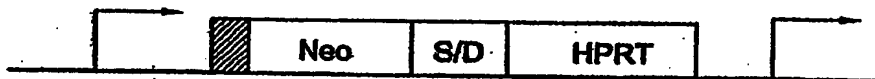


FIG. 12G.

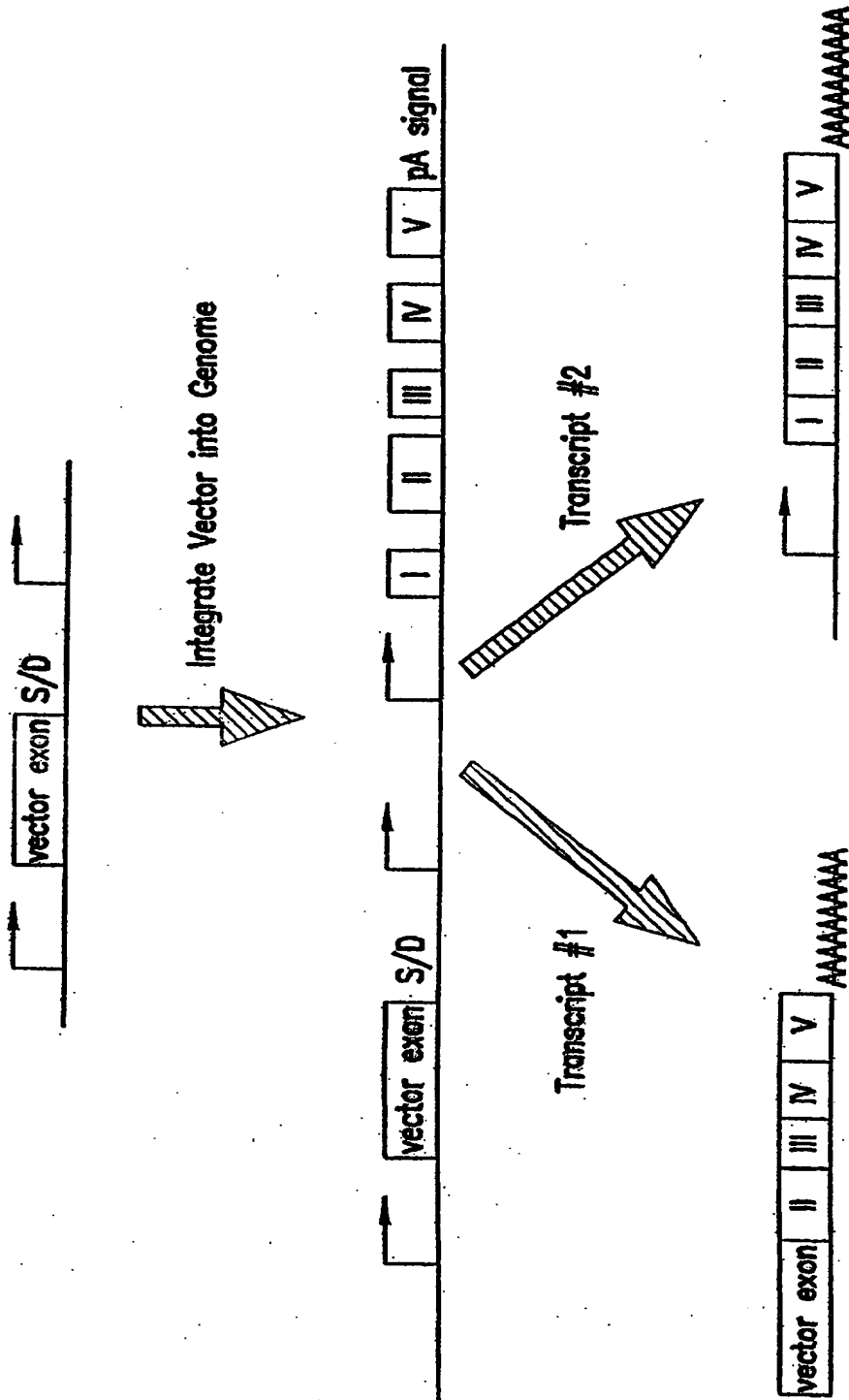


FIG. 13.

[illegible]

FIG. 14A.

GTCCGCCCCCTAATCCGCCCATCCGCCCTAATCCGCCCAAGTTCGCCCAATTCGCCGCC
ATGGCTGACTAATTTTTTTTATTTATGAGAGGCCGAGGCCGCTCGGCTCTGAGCTATTCC
AGAAGTAGTGAGGAGGCTTTTTGGAGGCTAGGCTTTTGAAGAAAGCTTGATTCTTCGACA
CAACAGTCTCGAAGTTAAGGCTAGAGCCACCATGATTGAACAAGATGGATTGCACGAGGTT
CTCCGCCGCTTGGGTGGAGAGGCTATTCGGCTATGACTGGGCACAACAGACAATCGGCTGC
CTGATGCGCCGCTGTTCGGCTGTGAGCGCAGGGGCGCCGGTCTTTTGTCAAGACCGAC
CTGTCGGGTGCCCTGAATGAAGTGCAGGACGAGGCGAGCGGGCTATCGTGGCTGGCCACGAC
GGGCGTTCCTTGGCGAGCTGTGCTCGACGTTGTCACTGAAGCGGGAAGGAGCTGGCTGCTATT
GGGCGAAGTGGCGGGCAGGATCTCCGTGTCATCTACCTTGCTCCTGCCGAGAAAGTATCCAT
CATGGCTGATGCAATGCGGCGGCTGCATACGCTTGATCCGGCTACCTGCCATTTCGACCACCA
AGCGAAACATCGCATCGAGCGAGCAGTACTCGGATGGAAGCCGGTCTTGTCGATCAGGATG
ATCTGGCAGAGAGCATCAGGGGCTCGGCCAGCCGAAGTTCGCCAGGCTCAAGGCGCGC
ATGCCCGACGGGAGGATCTCGTGGTACCCATGGCGATGCTGCTTGGCGAATATCATGGT
GAAAAAGGCGCTTTCTGGATTATCGACTGTGGCGGCTGGGTGGCGGAGCCCTATCAG
GACATAGCGTGGCTACCGTGATATTGCTGAAGAGCTTGGCGGGAATGGCTGACCGCTTC
CTCGTGGTTACGGTATCGCGCTCCGATTCCGAGCGCATCGCTTCTATCGCTTCTTGAGC
AGTTCCTCTGAGCGGACTCTGGGGTTCGAAATGACCGACCAAGCGACGCCCAACCTGCCAT
CAGGATGGCGCAATAAATATCTTTATTTTCAATTACATCTGTGTGTTGGTTTTTGTGGAAG
ATCCGCTATGGTGCCACTCTCAGTACAATCTGCTCTGATGCCGATAGTTAAGCAGGCCCGCA
CACCAGCAACACCCGCTGACCGGCCCTGACGGGCTTGCTGCTCCCGCATCCGCTTACAGA
CAAGCTGTGACGCTCTCCGGGAGCTGCATGTGTGAGAGTTTTCACCGTATCACCAGAACCG
CGGAGACGAAAGGCGCTCGTGATACGCTATTTTATAGTTAATGTCATGATAAATATGGTT
TCTAGAGCTCAGGTGGCACTTTTCGGGAAATGTGCGCGAACCCCTATTGTTTATTTCT
AAATACATTCAAATATGATCCGCTCATGAGACAATAACCTGATAAATGCTTCAATAATAT
GAAAAAGGAGATGAGTATTCACATTTCCGTGTGCGCTTATTCCTTTTTTTCGGCAT
TTTCCTTCTGTTTTTCTCACCAGAAAGCTGGTGAAGTAAAGATGCTGAGATCAGT
TGGGTGCAGAGTGGTTACATCGAAGTGGATCTCAACAGCGTAAGATCTTGAGATTTTC
GCCCGAAGAACGTTTCCAATGATGAGCACTTTTAAAGTCTGCTATGTGGCGCGTATTAT
CCGTTATTGACCGCGGCAAGACCACTCGGTCCCGCATACACTATTCTCAGAATGACTTGG
TTGAGTACTCACCAGTACAGAAAAGCATCTTACGGATGGCATGACAGTAAGAGAAATTATGC
AGTCTGCCATAACCATGAGTGATAACACTGCGGCCAAGTACTTCTGACAACGATCGGAGC
ACCGAAGGAGCTAACCCTTTTTTGCAACAATGGGGGATCATGTAATCGCCTTGATCGTTG
GGAACCGGAGCTGAATGAAGCCATACCAACGACGAGCGTGACACCATGCTGTAGCAA
TGGCAACAACGTTGCGCAAACTATTAAGTGGCGAAGTACTTACTCTAGCTTCCCGGCAACAT
TAATAGACTGGATGGAGCGGATAAAGTTCAGGACCACTTCTGCGCTCGGCCCTTCCGGCT
GGCTGGTTTATGGCTGATAAATCTGGAGCGGTGAGCGTGGGTCTCGCGGTATCATTGCAGCA
CTGGGGCCAGATGGTAAGCCCTCCGATATCGTAGTTATCTACACGACGGGAGTCAGGCAAC
TATGGATGAACGAAATAGACAGATCGCTGAGATAGTGGCTCACTGATTAGCATTTGGTAAC
TGTACAGCAAGTTTACTCATATATAGTTTATGATGATTAAAGTCTATTETTAATTTAAAG
GATCTAGGTGAAGATCTTTTGTATATCTGATGACCAAAATCCCTAACSTGAGTTTCGTT
CCACTGAGCGTCAGACCCGTAAGAAAGATCAAGGATCTTCTTGAGATCTTTTTTCTGCG
DGTAACTGCTGCTTGCAACAAAAAACCCGCTAGCAGCGGTGTTGTTTGGCGATCA
AGAGCTACCAACTCTTTTCCGAAGGTAAGTGGCTTCAGCAGAGCGAGATACCAATACTGT
CCTTCTAGTGTAGCCGTAGTTAGGCAACCACTTCAAGAACTCTGTAGCACCAGCTACATACCT
CGCTCTGCTAATCTGTTACCAAGTGGCTGCTGCAAGTGGCGATAAGTCTGTCTTACCGGTT
GGACTCAAGACGATAGTTACCGGATAAGGCGCAGCGGTGGGCTGAACGGGGGTTCGTGCA
CACAGCCAGCTTGGAGCGAAGCAGCTACACCGAAGTGAAGATACCTACAGCGTGAGCTATGA
GAAAGCGCCAGCTTCCGGAAGGGAGAAAGCGGACAGGTATCCGTAAGCGGACGGGTGCG
GAACAGGAGAGCGCAGAGGGAGCTTCCAGGGGAAACGCCGTGGTATCTTATAGTCTGTG
GGTTTTCGCCACCTCTGACTTGAAGCTCGATTTTTGTGATGCTCGTCAGGGGGCGGAGCTTA
TGGAAAAACGCCAGCAACCGGCCCTTTTACGGTTCTGGCTTTTGTGGCTTTTGTCTCAC
ATGGCTCGAC

FIG. 14B.

FIG. 15A

CTATTGGGCGAAGTGCCGGGGCAGGATCTCCTGTCATCTCACCTTGCTCCTGCCGAGAAAGTA
TCCATCATGGCTGATGCAATGCCGGGGCTGCATACGCTTGATCCGGCTACCTGCCCATTCGAC
CACCAAGCGAAACATCGCATCGAGCGAGCACGTACTCGGATGGAAGCCGGTCTTGTCGATCA
GGATGATCTGGACGAAGAGCATCAGGGGCTCGCGCCAGCCGAAGTGTTCGCCAGGCTCAAGG
CGCGCATGCCGACGGCGAGGATCTCGTCGTGACCCATGCCGATGCCCTGCTTGCCGAATATCA
TGGTGGAAATGGCCGCTTTCTGGATTCACTGACTGTGCCGGCTGGGTGTGGCGGACCGCT
ATCAGGACATAGCGTTGGCTACCCGTGATATTGCTGAAGAGCTTGCGGGCGAATGGGCTGAC
CGCTTCCTCGTCTTTACGGTATCGCCCTCCCGATTCCGAGCGCATCGCCTTCTATCGCCTTC
TTGACGAGCTTCTGAGGATCGGCCCTAACCTGGTGTGCTGACTAATTGAGATGCATGCTTT
GCATACCTCTGCCCTGCTGGGAGCCTGGGACTTCCACACCCTAACTGACACACATTCACA
GCTGGTTCTTTCCGCCTCAGAAGGTACACAGGCGAAATTGTAAGCTTAATATTTTGTAAAA
TTCCGCTTAAATTTTGTAAATCAGCTCATTTTAAACCAATAGGCCGAAATCGGCAAAATC
CCTTATAAATCAAAAGAATAGACCGAGATAGGGTTGAGTGTGTTCAGTTTGGAAACAAGAG
TCCACTATTAAAGAACGTGGACTCCAACGTCAAAGGGCGAAAAACCGTCTATCAGGGCGATG
GCCAC

FIG. 15B.

GAAAGTCTCCAGAGCTCCCAAGCGCCAGAGATGTCAAAGCATCCATCTCATATTAGTCAGCA
 ACCATATGTCGGGCTCTTAAGTCCGCTCAATCCCGGCTTAAGTCTCCGCTTCTCTGCTGCTGCT
 TCTATCCAGAAATAGTGTAGGAGGCTTTTGGAGGCTAGCTTGTCAAAAGTCTGATCTCT
 TCTGACACACAGCTTCGAACCTTAAGGCTAGAGCCCATGATGAAACATAGGATTGCACT
 GCAGGTTCTCCGGGCTCTGGGTGGAGAGGCTATTGGCTATGACTGGGCACAACAGACAAT
 CGCTGTCTCTGATGCTCCCTGTGTCCGCTATGACAGCGGGCGGCCGTCTCTTGTCTCA
 GACCGACCTGTCCGGTCCCTGAATCGAACTTCAGACAGAGCGACGCTCTCTGTGCTGCTG
 CCACGACGGGCTTCTCTTGCAGAGCTGTGCTCGACGTTGTCACTGAAGCGGGAAGGGACTGG

FIG. 16A.

[illegible]

FIG. 16B.



FIG. 17A.



FIG. 17B.



FIG. 17C.



FIG. 17D.



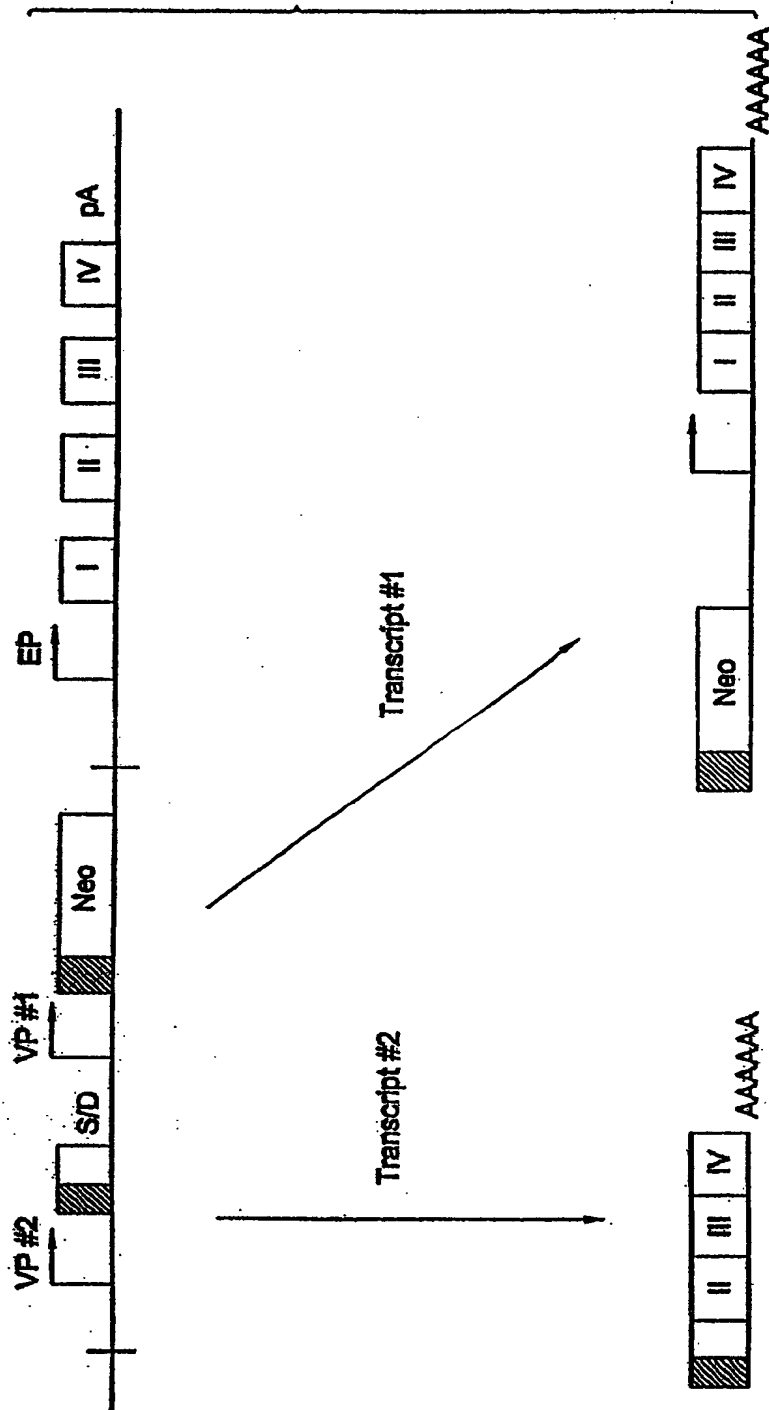
FIG. 17E.



FIG. 17F.



FIG. 17G.

FIG. 18.

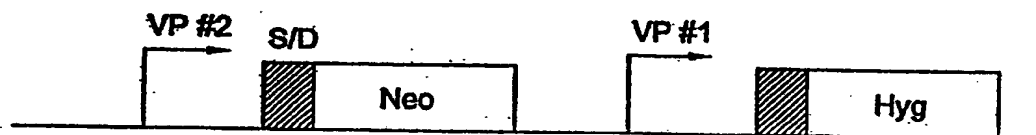


FIG. 19.

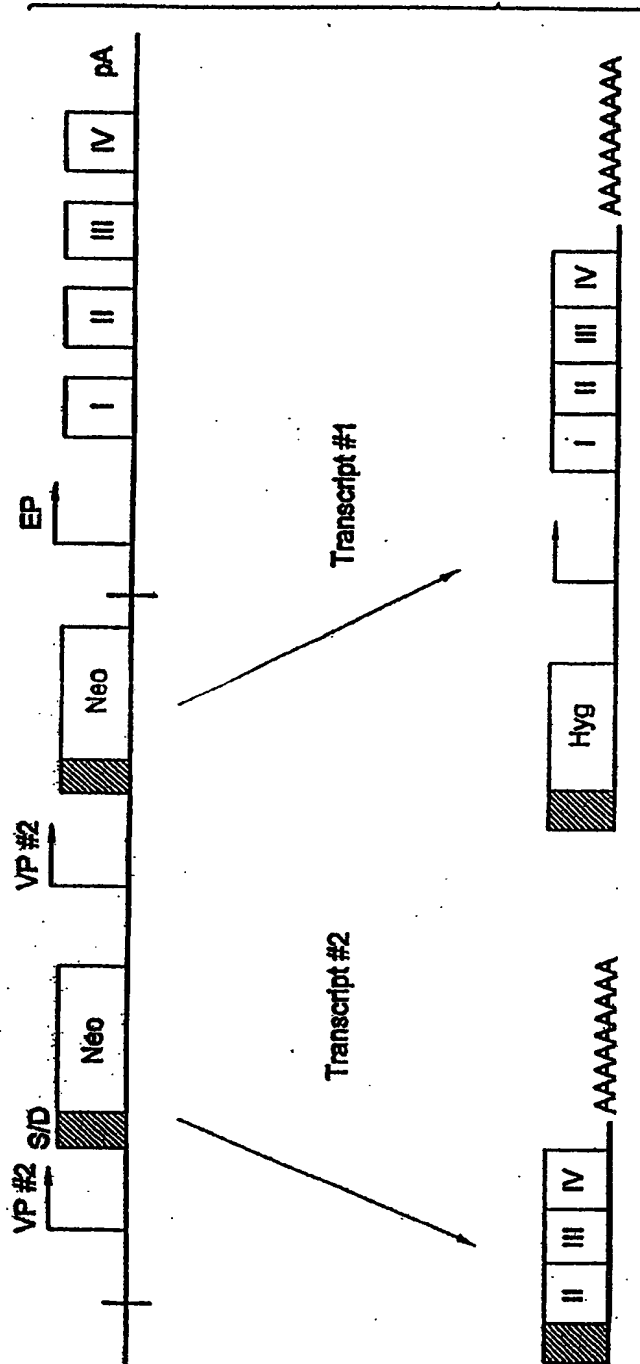
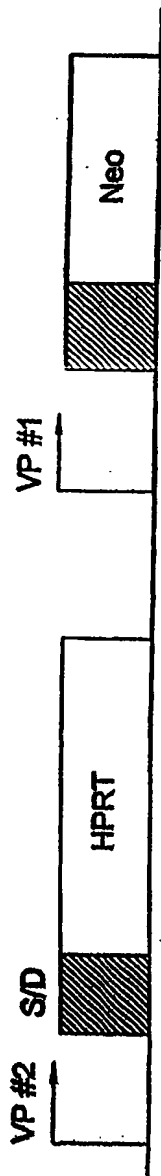


FIG. 20A.



A



B

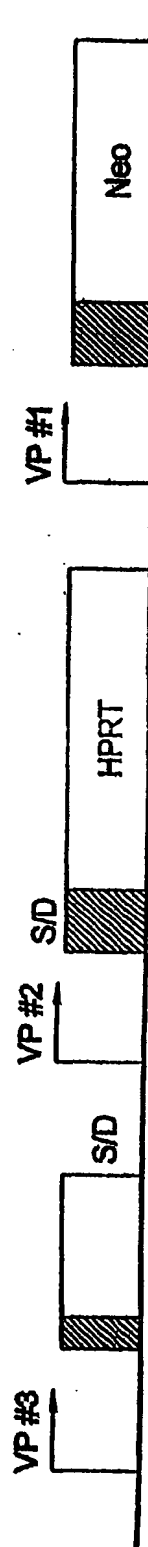


FIG. 21.

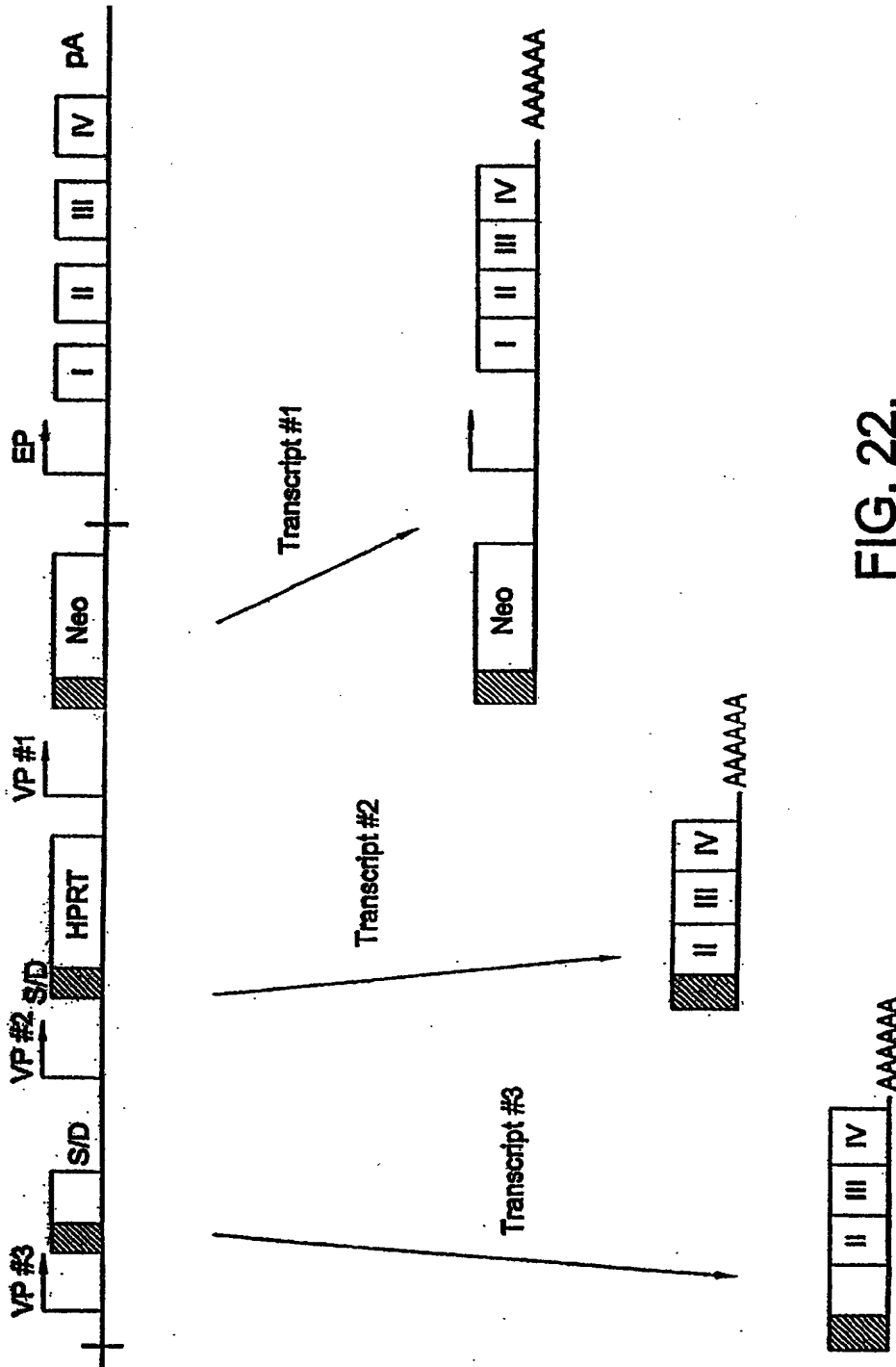
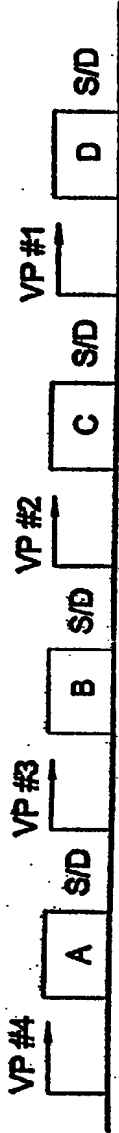


FIG. 22.



Exon A and Flanking Intron

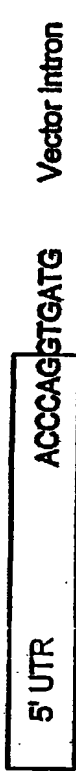


FIG. 23A.

Exon B and Flanking Intron



FIG. 23B.

Exon C and Flanking Intron

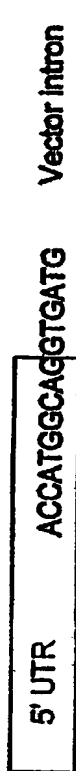
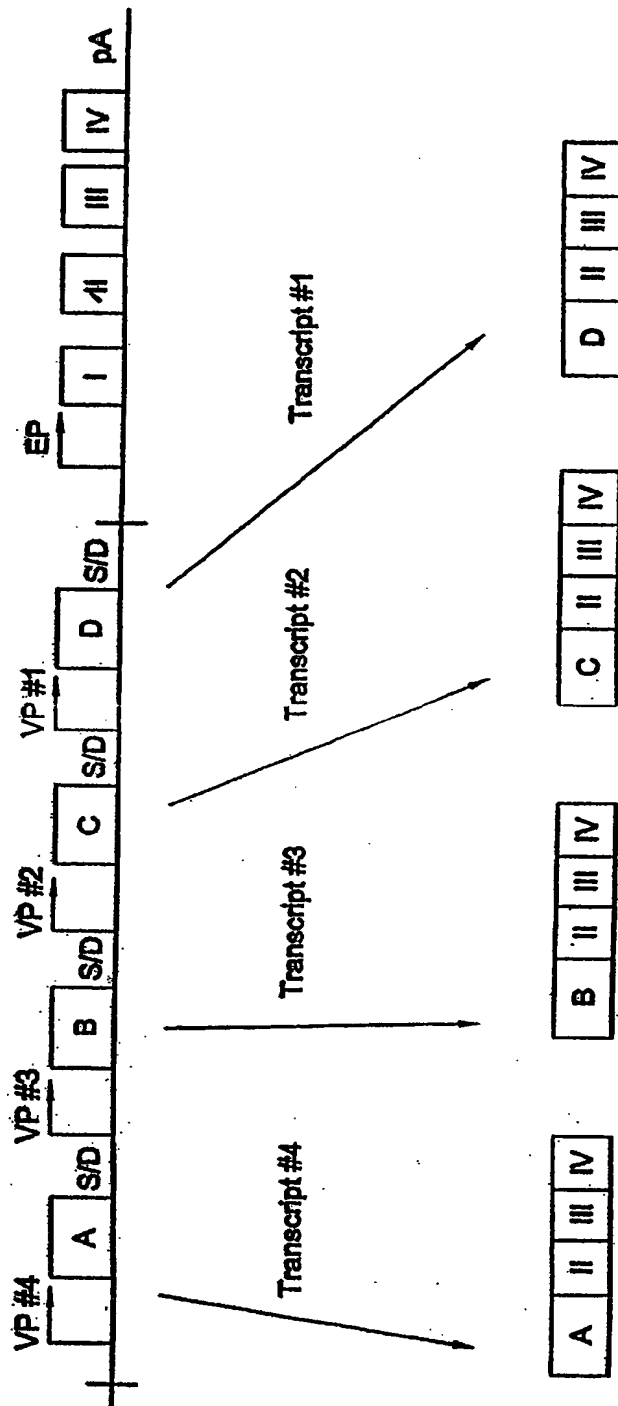


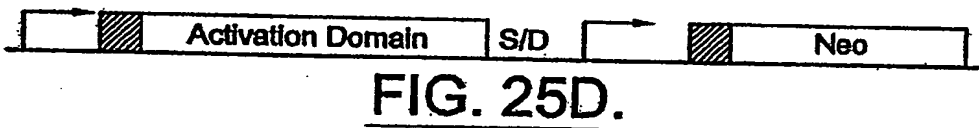
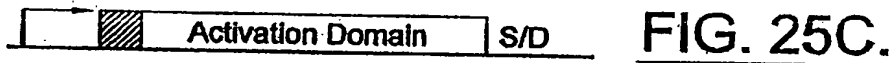
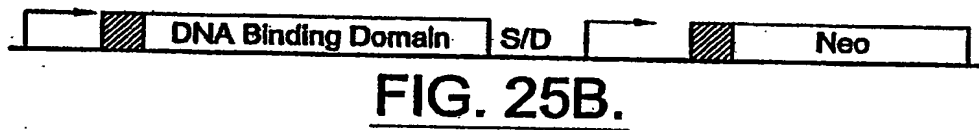
FIG. 23C.

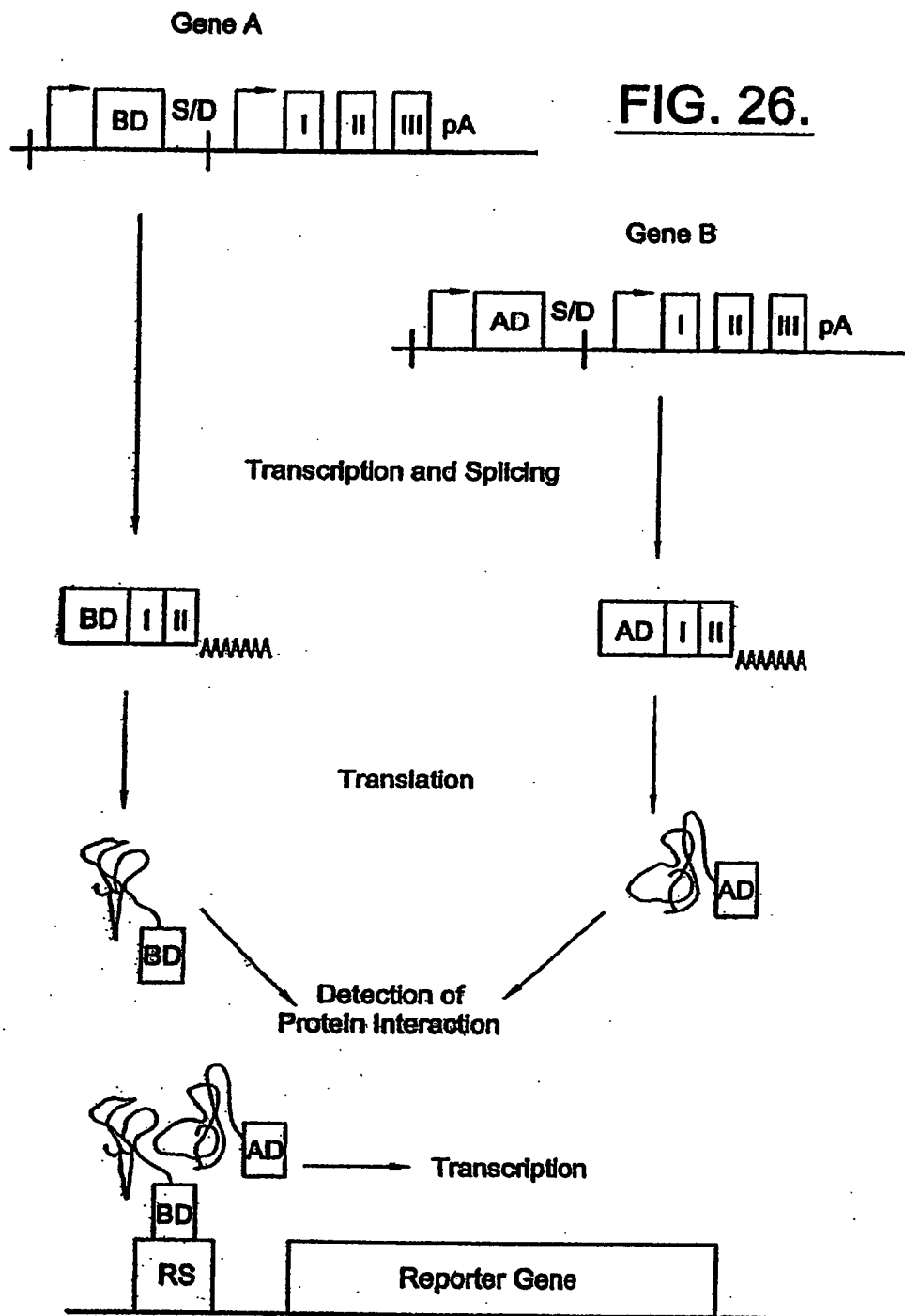
Exon D and Flanking Intron

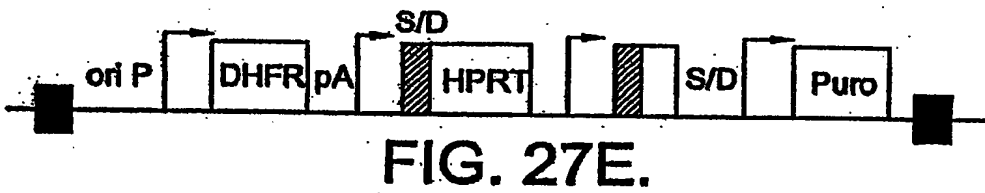
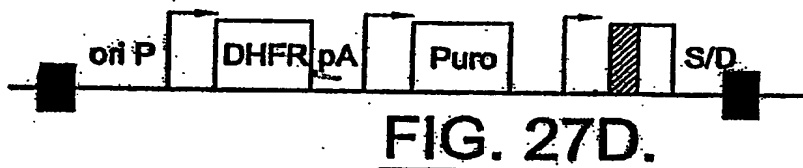
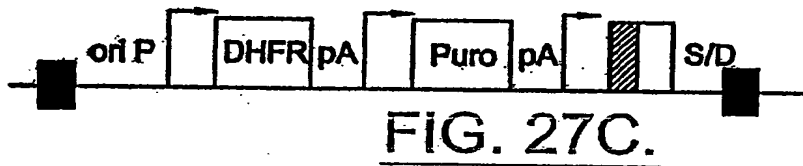
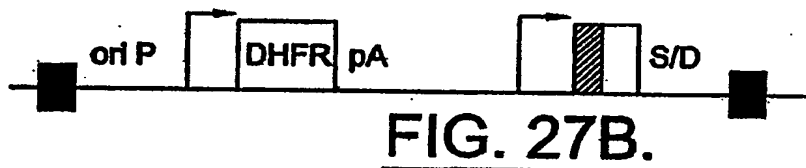


FIG. 23D.

FIG. 24.







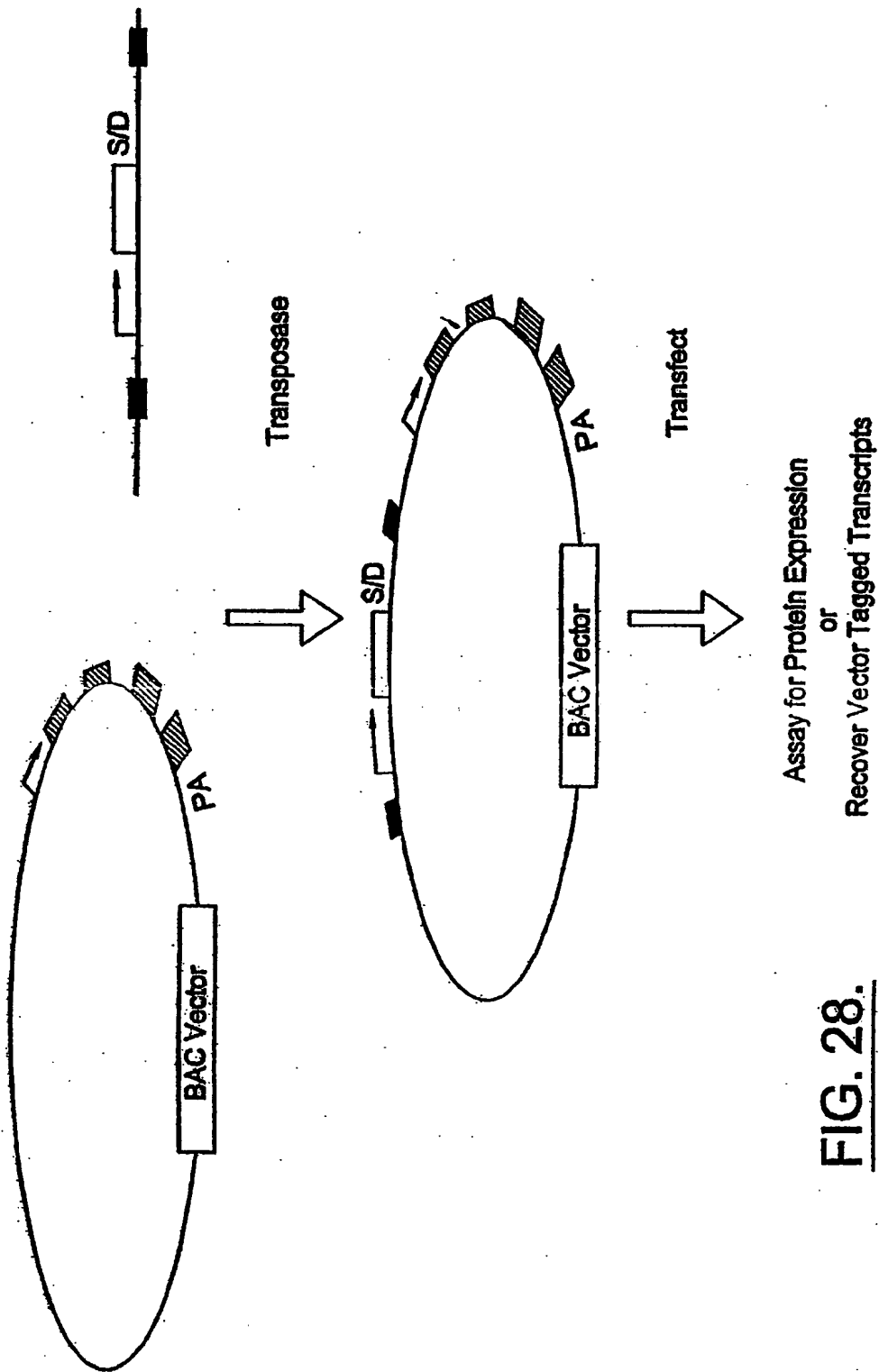


FIG. 28.

[illegible]

FIG. 29A.

GGTGATGCCGGCCACGATGCGTCCGGCGTAGAGGATCCACAGGACGGGGTG
TGGTCGCCATGATCGCGTAGTCGATAGTGGCTCCAAGTAGCGAAGCGAGC
AGGACTGGGCGGCGGCCAAAGCGGTCGGACAGTGCTCCGAGAACGGGTGC
GCATAGAAATTGCATCAACGCATATAGCGCTAGATCCTTGCTAGAGTCGAG
GCCGCCACCGCGGTGGAGCTCCAGCTTTTGTTCCTTTAGTGAGGGTTAAT
TTCGAGCTTGGCGTAATCATGGTCATAGCTGTTTCCTGTGGTGAAATTGTTA
TCCGCTCACAATTCACAACATACGAGCCGGAAGCATAAAGTGTAAG
CCTGGGGTGCCTAATGAGTGAGCTAACTCACATTAATTGCGTTGCGCTCAC
TGCCCCGCTTCCAGTCGGGAAACCTGTCGTGCCAGCTGCATTAATGAATCC
GCCAACGCGCGGGGAGAGGCGGTTTGCCTATTGGGCGCTCTTCCGCTTCCT
CGCTCACTGACTCGCTGCGCTCGGTGCTTCGGCTGCGGCGAGCGGTATCAG
CTCACTCAAAGGCGGTAATACGGTTATCCACAGAATCAGGGGATAACGCA
GGAAAGAACATGTGAGCAAAAGGCCAGCAAAAGGCCAGGAACCGTAAAA
AGGCCGCGTTGCTGGCGTTTTTCCATAGGCTCCGCCCCCTGACGAGCATC
ACAAAAATCGACGCTCAAGTCAGAGGTGGCGAAACCCGACAGGACTATAA
AGATACCAGGCGTTTTCCCTGGAAGCTCCCTCGTGCGCTCTCTGTTCCG
ACCCTGCCGCTTACCGGATACCTGTCCGCTTTCTCCCTTCGGGAAGCGTG
GCGCTTTCTCATAGCTCACGCTGTAGGTATCTCAGTTCGGTGTAGGTGCT
CGCTCCAAGCTGGGCTGTGTGCACGAACCCCCCGTTTCAGCCCGACCGCTGC
GCCTTATCCGCTAATATCGTCTTGAGTCCAACCCGGTAAGACACGACTTA
TCGCCACTGGCAGCAGCCACTGGTAACAGGATTAGCAGAGCGAGGTATGT
AGGCGGTGCTACAGAGTTCTTGAAGTGGTGGCCTAACTACGGCTACACTAG
AAGGACAGTATTTGGTATCTGCGCTCTGCTGAAGCCAGTTACCTTCGGAAA
AAGAGTTGGTAGCTCTTGATCCGGCAAACAACACCGCTGGTAGCGGTG
GTTTTTTTGTGCAAGCAGCAGATTACGCGCAGAAAAAAGGATCTCAAG
AAGATCCTTTGATCTTTTCTACGGGGTCTGACGCTCAGTGGAACGAAAAC
CACGTTAAGGGATTTTGGTCATGAGATTATCAAAAAGGATCTTCACCTAGA
TCCTTTTAAATTAATAATGAAGTTTTAAATCAATCTAAAGTATATAGAGT
AAACTTGGTCTGACAGTTACCAATGCTTAATCAGTGAGGCACCTATCTCAG
CGATCTGTCTATTTGCTTCATCCATAGTTGCCTGACTCCCCGTCGTGTAGAT
AACTACGATACGGGAGGGCTTACCATCTGGCCCCAGTGCTGCAATGATACC
GCGAGACCCACGCTCACCGGCTCCAGATTATCAGCAATAAACAGCCAGC
CGGAAGGGCCGAGCGCAGAAGTGGTCTGCAACTTTATCCGCCTCCATCCA
GTCTATTAATTGTTGCCGGGAAGCTAGAGTAAGTAGTTCGCCAGTTAATAG
TTTGCGCAACGTTGTTGCCATTGCTACAGGCATCGTGGTGTACGCTCGTC
GTTTGGTATGGCTTCATTCAGCTCCGGTTCCCAACGATCAAGGCGAGTTAC
ATGATCCCCCATGTTGTGCAAAAAGCGGTTAGCTCCTTCGGTCTCCGAT
CGTTGTGAGAAGTAAGTTGGCCGCGAGTGTTATCACTCATGGTTATGGCAGC
ACTGCATAATTCTCTTACTGTTCATGCCATCCGTAAGATGCTTTTCTGTGACT
GGTGAGTACTCAACCAAGTCATTCTGAGAATAGTGTATGCGGCGACCGAG
TTGCTCTTGCCCGGCGTCAATACGGGATAATACCGCGCCACATAGCAGAAC
TTTAAAAGTGCTCATCATTGGAAAACGTTCTTCGGGGCGAAAACCTCTCAAG
GATCTTACCGCTGTTGAGATCCAGTTCGATGTAACCCACTCGTGCACCCAA
CTGATCTTCAGCATCTTTTACTTTTACCAGCGTTTCTGGGTGAGCAAAAAC
AGGAAGGCAAAATGCCGCAAAAAGGGAATAAGGGCGACACGGAAATGT
TGAATACTCATACTCTTCTTTTCAATATTATTGAAGCATTTATCAGGGTT
ATTGTCTCATGAGCGGATACATATTTGAATGTATTTAGAAAAATAAACAA
TAGGGGTTCCGCGCACATTTCCCGAAAAGTGC

FIG. 29B.

FIG. 30A.

[illegible]

FIG. 30B.

TTTTTGTGTTGCAAGCAGCAGATTACGCGCAGAAAAAAGGATCTCAAGAA
GATCCTTTGATCTTTTCTACGGGGTCTGACGCTCAGTGGAACGAAAACCTCA
CGTTAAGGGATTTTGGTCATGAGATTATCAAAAAGGATCTTCACCTAGATC
CTTTTATCGGTGTGAAATACCGCACAGATGCGTAAGGAGAAAAATACCGCAT
CAGGAAATTGTAAGCGTTAATAATTCAGAAGAACTCGTCAAGAAGGCGAT
AGAAGGCGATGCGCTGCGAATCGGGAGCGGCGATACCGTAAAGCAGGAGG
AAGCGGTAGCCCATTCGCCGCCAAGCTCTTCAGCAATATCACGGGTAGCCC
AACGCTATGTCTGTATAGCGGTCCGCCACACCCAGCCGGCCACAGTCGATG
AATCCAGAAAAGCGGCCATTTTCCACCATGATATTGGCAAGCAGGCATCG
CCATGGGTACGACGAGATCCTCGCCGTGGGCGATGCTCGCCTTGAGCCTG
GCGAACAGTTCGGCTGGCGCGAGCCCTGATGCTCTTCGTCCAGATCATCC
TGATCGACAAGACCGGCTTCCATCCGAGTACGTGCTCGCTCGATGCGATGT
TTCGCTTGGTGGTGAATGGGCAGGTAGCCGGATCAAGCGTATGCAGCCG
CCGCATTGCATCAGCCATGATGGATACTTTCTCGGCAGGAGCAAGGTGAG
ATGACAGGAGATCCTGCCCCGGCACTTCGCCCAATAGCAGCCAGTCCCTTC
CCGCTTCAGTGACAACGTGAGCACAGCTGCGCAAGGAACGCCCGTCTGTG
GCCAGCCACGATAGCCGCGCTGCCCTCGTCTTGCAGTTTCATTACGGGCACCG
GACAGGTGGTCTTGACAAAAAGAACCGGGCGCCCTGCGCTGACAGCCG
GAACACGGCGGCATCAGAGCAGCCGATTGTCTGTTGTGCCAGTCATAGCC
GAATAGCCTCTCCACCCAAGCGGCCGGAGAACCTGCGTGCAATCCATCTTG
TTCAATCATGCGAAACGATCCTCATCTGTCTCTTGATCAGAGCTTGATCC
CCTGCGCCATCAGATCCTTGGCGGCGAGAAAGCCATCCAGTTTACTTTGCA
GGGCTTGTAACCTTACCAGATAAAGTGCTCATCATTGGAAAAAatttaattgt
cgacctgaatttaccgggtaggaggcgcttttccaaaggcgtctggagcatgcgttttagcagcccgctgggc
acttggcgtacacuaagtggcctctggcctgcacacattccacatccacgggtaggcgcaactggctcgttcttggc
ggcccccttcggcgaaccttctacccctcccttagtcagggaagtccccccggccccgcaactcgctcgtgcaggacgtg
acaaaaggaaatagcagcttctacctcgttcagatggacaagcagcgtgagcaaaggagcggtaggccttggg
gcagcggcnaatagcagcttctcctcgttcttgggctcagaggctggnaagggtggggtccggggcgggctcag
gggcgggctcaggggcggggcgggcgccgaaggctcctcggaggccggcatctgcagccttcaaaagcgacgt
ctgcggcgtgttctcctcctcctcctcctcgggcttctgacctgcacacatctagatctgcagcgtgagcttaccatga
ccgagtaaaagcccaagggtgcctctgcaccccgagcagcgtcccccgggcgtaagcaacctgcggcgcgcttgc
tcgactaccccgccagcgcccaacggtcgaacccggacggccacatcgagcgggtacccgagctgcagaaactcttct
cagcgagctgggctcgacaatggcaagggtgggttcgggacgagcgccggcggggtggcggtctggaccagcg
gagagcgttcgaagcggggcggtgttccggagatcgcccgccgaatggcgagttgagcggtcccgctggcgc
gcagcaacagaaggaggctccggcgatcgacgggacagggagccgggtgggtctcggccacggctgggc
gtcttcggcgacacagggcagggtctgggaagcgctgtgtctccggagtgaggcgccagcgccg
gggtggcgcttctggagacctcgagcccgcaactccctctcagagcgctgggttccggtaacggagac
gtcgggttcgggaaggacggcgacctgggtgcatacgccgaagctgggtgcctgacggcccgcccgacccgca
ggccggacgggaaggagcgacggcccaatgcataggcatgggcaggtaagtatcaaggtagcGCCGC
TAACCTGGTTGCTGACTAATTGAGATGCATGCTTGCATACTTCTGCCTGCT
GGGGAGCCTGGGGACTTTCCACACCCTAACTGACACACATTCCACAGCTGG
TTCTTTCCGCTCAGAAGGTACACAGGCGAAATTGTAAGCGTTAATATTTT
GTTAAAATTCCGCTTAAATTTTGTAAATCAGCTCATTTTTTAACCAATAG
GCCGAAATCGGCAAAATCCCTTATAAATCAAAAGAATAGACCGAGATAGG
GTTGAGTGTGTTCCAGTTTGGAAACAAGAGTCCACTATTAAAGAACGTGGA
CTCCAACGTCAAAGGGCGAAAAACCGTCTATCAGGGCGATGGCCAC

FIG. 30C.

FIG. 31B.

FIG. 32A.

a tggaggtagtaagacc tcccttaccacc taaggcagggaactgccttgccttaccacaatgtcgtcttaccacaattgagt
cgtctccctt tggaa tggcccttggaccggcccaacc tggcccttggagggtccaattgtctgttatttca tggctt
tttaccacaactca ta ttttgc tgggtttgaaggatgcctt taaggacc ttttgaacaaagccgc tctacc tgcata tc
agggtgcctgtgtgcagctt tgcata tggagttaga tttgcctcccttggcttaccacta tgggtgaagggtgcctgcggag
gggtga tgcaggaga tgcaggaga tgaaggagg tga tggaga tgaagg tgaaggaggcaggag tga tgaactgttga
ggagaaagcccttca tctgtattaaagccgtgtt tcccccgcac taaggaa taat tcccccgtagacatca tgcgtgcgtt
gggtgtatttctggcactgtcttgccttgccttaccacttgccttcccaactggggcaattgggca taccctgtgtgcgtgcactc
agctccgcgtcacaacccttctgcgttggaaacaattagcgacatttacc tgggtgagcaatagacatgcacggctttag
cc tggcctcccttcaat tccacc taaggaa tgggagcaaccagca tgcaggaaaggagcaaggcagcaaaat tccagccccc
tggggagg tggggcga ta tgcacaaggatgcac tccca tctac tctgggtatca ta tgc tgc tgc ta ta tgc tggaga ta
gca ta tgc taccaga ta gca ttagga tagca ta taccaccaga ta taga ttagga tagca ta tgc taccaga ta taga t
tagga tagca ta tgc taccaga ta taat ttagga tagca ta taccaccaga ta taga ttagga tagca ta tgc taccaga
ta taga ttagga tagca ta tgc taccaga ta taga ttagga tagca ta tgc taccaga ta taga ttagga tagca ta tgc
taccaga ta tttgggtagta ta tgc taccaga ta taat ttagga tagca ta taccaccaga ta tgc taccaga ta taga ttagga tagca ta tgc
accaga tagca ttagga tagca ta taccaccaga ta taga ttagga tagca ta tgc taccaga ta taga ttagga tag
cctatgc taccaga ta taat ttagga tagca ta taccaccaga ta taga ttagga tagca ta tgc taccaga ta taga ttagga tag
gga tagca ta tgc taccaga ta taga ttagga tagca ta tgc taccaga ta ttagga tagta ta tgc taccaga tagcaaca
ttagccaccgtgc tctaccaga cctgtgaa ta tggaga ccaaccctgtgtc tgggc taccagcga agtgtgtgt
attgtgtc taccaga tgcagca tgcagccctt tcttggcccgccacc tacc tta tgcagga t tcccgaggtgccttga
gtgg tttgtggcag tgg tttgacggcgtgtgaggggttaccatcagccagt tttaccacctt tttaccagtcca
aaacggcaggcggcgtgtgtggggc tgcagcgtgcctccactccacaa tttcaaaaaaagggtggccactgtcttgt
tta tggggcccttggcgtggggccctttaa ttttgggggtgtttagaga caaccgtggag tccgtgc tgcgtgcgt
ccactcttcttcccttgttaccaca taggtgtaccaca tgg tccactgtcttgg tcc tgc tgggacac tcttaaac
ccagtaca ta tgcac tagga tta tgtgtgcctatagca taat tgcgtgtaga tga ca tccagctt taccagctgtgc
ccacccttgggtttctat tttttaga ta ttagga ttttca t tcc tacc tagta tttatggccagggtt tttgggggt
ata tttgtgtca tagcaaa tgcacac tgaaccccttccaa ttttattc tggggcgtcacc tgaaccttgttttga
gacccacacacaccccttaccgttccacac tgcaggtta tctat tgc taacgaaggaga tgaagagcaggcgaag
attcaggagagttacc tgcgccttcttga tcttaccacac tgccttgtgtacaaat tgg tccac taccctgtgtga tccig
accctatgtaaa taacacgttgaacgtca tgggttggaga ta tgc tgttctttagga cccctt tacc taaccc taat tga
tagca ta tgc tcccttgggttaac ta tgc ta tgaat tgggttagt tggatagta ta tacc taccagggaagca ta tgc
ctaccctttaggttaccagggggccttaccacac ta tgc ta tgcctt tgggggtcccttaccgtgtacac
ggcccttctga tttgccttgggttagcctccgttagtcttcc tggggcccttggaggatca tgc tcccccgttgggttaa
gagcttccggcagagttaccac taaggcaatgtgtgttgcagtcacagac tgaacag tgc tccaggatgaagcc
actaggtgttggcaaa tgtgcac tccatttaaggatgttcaactacagtcagagaaaccccttgtgtt tgggtcccccgt
gtcacatgttggacagggccaggttggcaagtgttaccacacac tgaaggat tacc tgcac tgcacagaaacacaaac
aaagcgtctc tcttaccagaaagggcagga tccgtatgcaggtttaggttgc tccggcggcggcggc
CGCAAGGCGCGCGGATCCACAGGAGGGGTGTGGTGGCCATGATCGCGTA
GTCGATAGTGGCTCCAAGTAGCGAAGCGCGAGCAGGACTGGGCGGCGGCCAA
AGCGGTGGGACAGTGCTCCGAGAACGGGTGCGCATAGAAATTGCATCAAC
GCATATAGCGCTAGATCCTTGCTAGAGTCGAGATCTGTGAGCCATGTGAC
CAAAAGGCCAGCAAAAGGCCAGGAACCGTAAAAAGGCCGCGTTTGCTGGCG
TTTTTCCATAGGCTCCGCCCCCTGACGAGCATCACAAAAATCGACGCTCA
AGTCAGAGGTGGCGAAACCCGACGAGCACTATAAGATACCAGGCGTTTCC
CCCTGGAAGCTCCCTCGTGCGCTCTCCTGTTCCGACCCTGCCGCTTACCGG
ATACCTGTCCGCTTTCTCCTTCCGGAAGCGTGGGCGCTTTCTCATAGCTCA
CGCTGTAGGTATCTCAGTTCGGTGTAGGTGTTCCGCTCCAAGCTGGGCTGT
GTGCACGAACCCCCCGTTCAGCCCCGACCGCTGCGCTTATCCGGTAACAT
CGTCTTGAGTCCAACCCGTAAGACACGACTTATCGCCACTGGCAGCAGCC
ACTGGTAACAGGATTAGCAGAGCGAGGTATGTAGGCGGTGCTACAGAGT-

FIG. 32B.

FIG. 32C.

aactgaactgaanaagccacnaaaagtctcttaccgaagccattgggaataatacaacgggtggaataaccagtgatcttttttcccaatctt
 agcttcccttagctccctgaanaatctcgaataacacnaaaatagcccccgttagtgatcttattcaatattggtgaanaagtggaaac
 tcttaccgtgccaacacagctctcaatcttcccaaaTTAATTAAAGGCGCGCCgcctctccctggctaggagtcacg
 tagaaggagataccgagcgaaggaaatctgggtcgcgggtgtgtctgtaataggaggtagtaagacccctcttacaacataa
 ggcpaggaaatgccccttgcatactcaaaaagtctcttaccacatttagctcgtctccctcttgaatggcccccgtgaacccg
 cccacacccctggcccccgaaggagtccttctgttatttcaatgggtcttttacaacataataatttgcctgaggttttgaag
 gattgcaattaaaggacattgttattgaacaaagccgcctctaccctgcaataacaggtgacatgtgtgacgctttagcgaaggag
 tagaatttgcctccctgggttccacataaggtagaaggagctgcgcgcgaagggtgaagcgaagatgacggagaagcgaagga
 aggtgaaggagaagagggtgaagggaaggcaggagtgatgaactgtttaggagacgcctcaatcgtatttaaaagccggtg
 tatcccccgcacaaagaaataaaccagtagacaataagctgctgttgggtgatttctggccaatctgtctgttcaacattt
 tgcctcccaacaatggggcaatgggcaataccatgttgcagctacacagctccgcgcacacacccctctcgcgttga
 aaacattagcgaacttaccctggtagcaatagacaatgacaggtttagcctggcctcttaaatccactaagaaagg
 agcaaccagcaatgacaggaagaaggaacagcagcaaaatcaacgccccctgggaggtggcggaataagcaaggatag
 cactccacctcttacttgggtatcaatagtgactgtataagcaggaagcaatagttaccggaacacagattaggaata
 gcaataactaccagaataagaataggaatagcaatagttaccagaataagaataggaatagcctatgttaccagaataaaatt
 aggaatagcaataactaccagaataagaataggaatagcaatagttaccagaataagaataggaatagcctatgttaccagaata
 atagaataggaatagcaatagttaccagaataagaataggaatagcaatagttaccagaataagaataggaatagcctatgttaccaga
 ataaattaggaatagcaataactaccagaataagaataggaatagcaatagttaccagaataagaataggaatagcctatgttaccaga
 accagaataagaataggaatagcaatagttaccagaataagaataggaatagcctatgttaccagaataagaataggaatagc
 atactaccagaataagaataggaatagcaatagttaccagaataagaataggaatagcctatgttaccagaataagaataggaatagc
 agatagcaatagttaccagaataagaataggaatagcaatagttaccagaataagaataggaatagcctatgttaccagaataagaatagga
 atataggaacacacacccctgtgttggcgtcagggcgaagtgtgttaattgtctccagaatgcagcaatgcgc
 cctatcttggcccccacacactactttagcaggtatccggggtgcaatagtggtttttagggcaagtgtttagcgcag
 tggtagcgggttacaaatagcaagtattacaccccttatttaccagtcacaaacccgagggcggtgtgggggtga
 cgttgcacccacacacacattcaaaaagaggtggcactgtcttgttttagggcccatggcgtgagcccttt
 aattttaggggtgttagagcaacacagtgaggtgcgtgttgcgcgtccacctctcttcccttgttacaataagagtgt
 aacacacatgggtcaccctgtcttggctccctggcggacacatcttaaataaccagatacaataatgacataggaatagtgtgtg
 ccaatagcaataaaattcgtgtgagaatgacatccagctttagcgttgcacccacccaatggatcttattgttacaagaattc
 agaatgttctatcttaccatagattttattgcccgaagggtttgtgaggttataatgggtgtatagcaaatgacacactga
 acccccggtacaaattttatttggggcggtacacagaaactgttttagacacctacacataacatttctgttcaaacctc
 agcagtattctatttagctaaacgaaggagaaatgaagaagcagggagaatcagggaggttcaatgcccgcctctgaatc
 ttagcgcctgccccttgggtacaaatgggttaccacccctgttggaatccctgacccaatgttaaaataaaacgggtgacatc
 aggtgggagataatcgtgttcttaggaaccccttaccacccctaaatcgaatagcaatagttcccttgggttaacatagtct
 atgaattagggttagtctggatagtaataacttaccacccggagcaatagttaccctttaggttaacatagtct
 taacacataatgttaatgcccctttaggggtgcgtttaggttagctacacagggcccttgaatgaagtgtgtgtgacccct
 cgtagcttcttgggcccctgggggtgacatgttcccccagcattgggttagagctttagcgaaggttacaaataaaggc
 aatgttgtttaggttaccagactgaaggttgcctcaggaatgaagccactcaggttggcaaatgtgaacataatctta
 taaggatgttaacttaccaggaacccctttaggttgggtcccccctgtcacaatgggaacagggccaggttggca
 agttgttaccacacacacgaagggttaccatgacatgcccgaatacaaaaacaaagcctctctgacacaggaagg
 ggagagatgacgttagtgaggttagtctgctcggcgggcGCGGCCGAAGGCGCGCCGGATCC
 ACAGGACGGGTGTGGTGCCTATGATCGCGTAGTCGATAGTGGCTCCAAGT
 AGCGAAGCGAGCAGGACTGGGCGGCGGCCAAAGCGGTGCGACAGTGTCTC
 GAGAACGGGTGCGCATAGAAATTGCATCAACGCATATAGCGCTAGATCCT
 TGCTAGAGTTCGAGATCTGTGAGCCATGTGAGCAAAAGGCCAGCAAAAGG
 CCAGGAACCGTAAAAAGGCCGCTTGGTGGCGTTTTCATAGGCTCCGCC
 CCCCTGACGAGCATCACAAAATCGACGCTCAAGTCAGAGGTGGCGAAC
 CCGACAGGACTATAAAGATACCAGGCGTTTCCCCCTGGAAGCTCCCTCGTG
 CGCTCTCTGTTCGGACCCTGCCGCTTACCGGATACCTGTCCGCCTTCTCC
 CTTCCGGGAAGCGTGGCGCTTCTCATAGCTCACGCTGTAGGTATCTCAGT-

FIG. 33B.

TCGGTGTAGGTCGTTTCGCTCCAAGCTGGGCTGTGTGCACGAACCCCCGTT
CAGCCCGACCGCTGCGCCTTATCCGGTAACCTATCGTCTTGAGTCCAACCCG
GTAAGACACGACTTATCGCCACTGGCAGCAGCCACTGTGAACAGGATTAG
CAGAGCGAGGTATGTAGGCGGTGCTACAGAGTCTTGAAGTGGTGGCCTA
ACTACGGCTACACTAGAAGGACAGTATTTGGTATCTGCGCTCTGCTGAAGC
CAGTTACCTTCGGAAAAAGAGTTGGTAGCTCTTGATCCGCCAAACAAACCA
CCGCTGGTAGCGGTGGTTTTTTTGTGTGCAAGCAGCAGATTACGCGCAGAA
AAAAAGGATCTCAAGAAGATCCTTTGATCTTTTCTACGGGGTCTGACGCTC
AGTGGAAACGAAAACCTACGTTAAGGAGTTTGGTCATGAGATTATCAAAA
AGGATCTTACCTAGATCCTTTTATCGGTGTGAAATACCGCACAGATGCGT
AAGGAGAAAAATACCGCATCAGGAAATTTGAAGCGTTAATAATTCAAGA
ACTCGTCAAGAAGGCGATAGAAGGCGATGCGCTGCGAATCGGGAGCGCGG
ATACCGTAAAGCACGAGGAAGCGGTACGCCATTGCGCGCAAGCTCTTCA
GCAATATCACGGGTAGCCAACGCTATGTCCTGATAGCGGTCCGCCACACCC
AGCCGGCCACAGTCGATGAATCCAGAAAAGCGGCCATTTCCACCATGATA
TTCCGGAAGCAGGCATCGCCATGGGTACGACGAGATCCTCGCCGTCGGG
CATGCTCGCCTTGAGCCTGGCGAACAGTTCGGCTGGCGCGAGCCCCGTGATG
CTCTTCGTCAGATCATCTGATCGACAAGACCGGCTTCCATCCGAGTAGC
TGCTCGCTCGATGCGATGTTTCGTTGGTGGTCAATGGCAGGTAGCCGG
ATCAAGCGTATGCAGCCGCCGCTATGCTAGCCATGATGGATACTTTCTC
GGCAGGAGCAAGGTGAGATGACAGGAGATCCTGCCCGGCACTTCGCCCA
ATAGCAGCCAGTCCCTTCCCGCTTCAGTGACAACGTCGAGCACAGCTGCGC
AAGGAACGCCCGCTCGTGGCCAGCCACGATAGCCCGCTGCCTCGTCTTGCA
GTTTATTACAGGACCGGACAGGTCCGCTTGACAAAAAGAACCGGGCGC
CCCTCGCTGACAGCCGGAACACGGCGGCATCAGAGCAGCCGATTGCTG
TTGTGCCAGTCATAGCCGAATAGCCTTCCACCCAGCGGCCGGAGAACC
TGGTGCAATCCATCTTGTTCATCATGCGAAACGATCCTCATCTGTCTCT
TGATCAGAGCTTGATCCCCTGCGCCATCAGATCCTTGGCGCGAGAAAGCC
ATCCAGTTTACTTTGCAGGGCTTGTCACCTTACCAGATAAAAGTGCTCAT
CATTGGA AAAA C a t t c a a t t c g t c g a c t c g a a t t c t a c c g g t a g g g a g g c g t t t c c a a g g c a g t c t g g a
g a t t g c g t t t a g c a c c c g t t g g g a c t t g g c t a c a a g t g g c t c t g g c t g c a c a t t c a a c t a c a c c g t
a g g c a a c c g g t c g t t c t t t g g t g g c c t c g c g a c c t c t a c t a c t a c t a g t t a g g a a g t t a c c c c g g c
c g a c t t a g c t t g c a g g a c t g a c a a t g a a t a g a c g t c t a c t a g t c t g t t a g a t g g a c a g c a c a g t g a
g a a t g g c g g g t a g g c t t t g g g c a g g g a a t a g c a g t t t g c t a c t t c t t g g c t a g a g g c t g g a a g
g g g t g g t t c g g g g c g g g c t a g g g g c t a g g g g c g g g c g g g c a g g t t c t a c g g a g g c c g g
c a t t t g a c g t t a a a g c a g g t c t g a g g t t t c t c t c t a c t c t a g g a c t t t a c c t g a t t a c t t a g
a t c t t a g a c t t a g a t t a c t t a g a c t t a g a c c c a g g t t g c t t a g c a g g a c t t a c c c g g c
c g t a c a c c t t a g c g g g t t g c g a c t a c c c g c a c c g c a c c g g t a g a c c g g a c c t a c c g g g
g g t a c c g a g t g a a g a c t t c t a c c a g a g t t g g c t g a a c t g g g a g g t t g g t a g c a c a g a c g g c
c g g t t g g c g t t g g a c c g c g g a g g t t g a a g c g g g g c g g t t g c a g a c c g g c c g c a t g g c
g a t t a g c g t t c c c g g t t g c g c g a g a a g a t g g a a g g c t c t g g a c c g a c c g g g c a a g g a c c g
c g t g t t c t t g g c c c c g t g g g c t t t g c c g a c c a c c g g g a a g g g t t g g a a g c g g t g t g c t c c c g
g a t g g g g c g a g c g a g c g c g g g t g c c g c t t c t t g a g a c c t a g c c g g a c c t c c c t t c a g a g c
g c t g g t t c c g g t a c c g a g t t a g a g t t g c c g a a g g a c c g a a t g a c t a g a t t a g a c t t g g a g
t a g t a t a a g g t a g c G G C G C T A A C C T G G T T G C T G A C T A A C C T T G A T T G A T T G A T T G A T T G A T T
G C A T A C T T C T G C C T G C T G G G G A G C C T G G G G A C T T T C C A C A C C C T A A C T G A C
A C A C A T T C C A C A G C T G G T T C T T C C G C C T C A G A A G G T A C A C A G G C A G A A A T T
G T A A G C G T T A A T A T T T T G T T A A A A T T C G C G T T A A A T T T T T G T T A A A T C A G C -

FIG. 33C.

TCATTTTTTAACCAATAGGCCGAAATCGGCAAAATCCCTTATAAATCAAAA
GAATAGACCGAGATAGGGTTGAGTGTTGTTCCAGTTTGAACAAGAGTCC
ACTATTAAAGAACGTGGACTCCAACGTCAAAGGGCGAAAAACCGTCTATC
AGGGCGATGGCCAC

FIG. 33D.

[illegible]

FIG. 34A.

[illegible]

FIG. 34B.

FIG. 35A.

ggctctgacaaaagaaacggggtgccccctgcgtgacagccggaacacggcggaatagagcagccgattgtctgttgt
gcccgatcatagccgaa tagcctctcccccagggcgggagaaacctgcgtgcaatccatcttgttcaatcatgcaaac
gatccctcatctgtctcttgaatagagcttgatcccttgcgcaatcgaatcttggcggaagaaagccatccagtttacttt
gcagggttgtcaaccttaccagataAAAAGTGTCTCATCTTGGAAAACGTTCAATTCTGAG
GCGGAAAGAACCAGCTGTGGAATGTGTGTGTCAGTTAGGGTGTGGAAAGTCC
CCAGGCTCCCCAGCAGGCAGAGTATGCAAAGCATGCATCTCAATTAGTCA
GCAACCAGGTGTGGAAAGTCCCCAGGCTCCCCAGCAGGCAGAGTATGCA
AAGCATGCATCTCAATTAGTCAGCAACCATAGTCCCGCCCCCTAACTCCGCC
CATCCCGCCCCCTAACTCCGCCCAGTTCCGCCCATTTCTCCGCCCATGGCTG
ACTAATTTTTTTTTATTTATGTCAGAGGCCGAGGCCGCTCGGCCTCTGAGCT
ATTCCAGAAGTAGTGAGGAGGCTTTTTTGGAGGCCTAGGCTTTTGCAAAAA
GCTTGATTCTTCTGACACAACAGTCTCGAACTTAAGGCTAGAGCCACCATG
ATTGAACAAGATGGATTGCACGCAGGTTCTCCGGCCGCTTGGGTGGAGAG
GCTATTCGGCTATGACTGGGCACAACAGACAATCGGCTGCTCTGATGCCGC
CGTGTCCGGCTGTGAGCGCAGGGGCGCCCGGTTCTTTTTGTCAAGACCGA
CCTGTCCGGTGCCCTGAATGAAGTGCAGGACGAGGCAGCGCGGCTATCGT
GGCTGGCCACGACGGGCGTTCTTGCAGCTGTGCTCGACGTTGTCACTG
AAGCGGGAAGGGACTGGCTGCTATTGGGCGAACTGCCGGGGCAGGATCTC
CTGTCTACCTTGCTCCTGCCGAGAAAGTATCCATCATGGCTGATGCA
ATGCGGGCGGCTGCATACGCTTGATCCGGCTACCTGCCCATTCGACCACCAA
GCGAAACATCGCATCGAGCGAGCAGTACTCGGATGGAAGCCGGTCTTGT
CGATCAGGATGATCTGGACGAAGAGCATCAGGGGCTCGCGCCAGCCGAAC
TGTTCCGCAAGGCTCAAGGCGCGCATGCCCGACGGCGAGGATCTCGTCGTG
ACCATGGCGATGCCTGCTTGCCGAATATCATGGTGGAAAATGGCCGCTTT
TCTGGATTTCATCGACTGTGGCCGGCTGGGTGTGGCGGACCGCTATCAGGAC
ATAGCGTTGGCTACCCGTGATATTGCTGAAGAGCTTGGCGGCGAATGGGCT
GACCGCTTCCCTCGTGCTTACGGTATCGCCGCTCCCGATTTCGACGCGCATC
GCCTTCTATCGCCTTCTTGACGAGCAATTCgtctggcaggtaagtcgagccctggcgtcgtga tt
agtgatgataacagggttatgaccttgatttatttgcaatactaatcatatgtctaggatttgaaagggtgtttattctca
tgactaaftatggacaggactgaacgtcttgcctgaga tgtga tgaaggaga tggaggcca tcaat ttagccctctg
tgtctcaagggggctataaattcttctgtgacctgtctggattacatcaagcactgaatagaaa tagtgatagatccattc
ctatgactgtgata tttatcagactgaagcctatgttaatgaacagtcacaggggacataaaagtaattggtggagatgt
ctctcaactttaa tggaaagaa tgtctgtatgtggaagataat tggacactggcaaaacaa tgcagacttgcctcttg
gtcaggcgtataatccaaaga tggtaaggctgcaggttgc tgggtgaaggaccccaagggtgttgata taagcc
agactttgttgatttgaaattccagacaggtttgttgaggata tgccttgactataatgaatctttagggatttgaaatcat
gtttgtgtctttagtgaaactggaaagcaaaa taacagccta GCGGCCGCTAACCTGGTTGCTGA
CTAATTGAGATGCATGCTTTGCATACTTCTGCCTGCTGGGGAGCCTGGGGA
CTTTCCACACCCCTAACTGACACACATTCACAGCTGGTTCTTTCCGCCTCAG
AAGGTACACAGGCGAAATTGTAAGCGTTAATATTTTGTATAAATTTCGCGTT
AAATTTTTGTAAATCAGCTCATTTTTTAACCAATAGGCCGAAATCGGCAA
AATCCCTTATAAATCAAAAGAATAGACCGAGATAGGGTTGAGTGTGTGTTCC
AGTTTGGAAACAAGAGTCCACTATTAAGAACGTGGACTCCAACGTCAAAG
GGCGAAAAACCGTCTATCAGGGCGATGGCCAC

FIG. 35B.



FIG. 36.

FIG. 37A.

FIG. 37A.

FIG. 37B.

TTTTTGTTCGAAGCAGCAGATTACGCGCAGAAAAAAGGATCTCAAGAA
GATCCTTTGATCTTTTCTACGGGGTCTGACGCTCAGTGGAACGAAACTCA
CGTTAAGGGATTTTGGTCATGAGATTATCAAAAAGGATCTTCACCTAGATC
CTTTTATCGGTGTGAAATACCGCACAGATGCGTAAGGAGAAAAATACCGCAT
CAGGAAATTGTAAGCGTTAATAATTGAGAAGAACTCGTCAAGAAGGGCAT
AGAAGGGCATGCGCTGCGAATCGGGAGCGGGATACCGTAAGCAGCAGG
AAGCGGTACGCCATTTCGCCGCCAAGCTCTTCAGCAATATCACGGGTAGCC
AACGCTATGCTCTGATAGCGGTCCGCCACACCCAGCCGGCCACAGTCGATG
AATCCAGAAAAGCGGCCATTTCCACCATGATATTCGGCAAGCAGGCATCG
CCATGGGTACGACGAGATCCTCGCCGTGGGGCATGCTCGCCTTGAGCCTG
GCGAACAGTTCCGGCTGGCGCGAGCCCTGATGCTCTTCGTCCAGATCATCC
TGATGGACAAGACCGGCTTCCATCCGAGTACGTGCTCGCTCGATGCGATGT
TTCGCTTGGTGGTGAATGGGCAGGTAGCCGGATCAAGCGTATGCAGCCG
CCGCATTGCATCAGCCATGATGGATACTTTCTCGGCAGGAGCAAGGTGAG
ATGACAGGAGATCCTGCCCGGCACTTCGCCCAATAGCAGCCAGTCCCTTC
CCGCTTCAGTGACAACGTGAGCACAGCTGCGCAAGGAACGCCCGTCGTG
GCCAGCCACGATAGCCGCGCTGCCTCGTCTTGCAAGTTCATTACGGGCACCG
GACAGGTGGTCTTGACAAAAAGAACCGGGCGCCCTGCGCTGACAGCCG
GAACACGGCGGCATCAGAGCAGCCGATTGCTGTTGTGCCAGTCATAGCC
GAATAGCCTCTCCACCCAAGCGGCCGAGAACCTGCGTGCAATCCATCTTG
TTCAATCATGCGAAACGATCCTCATCCTGTCTCTTGATCAGAGCTTGATCC
CCTGCGCCATCAGATCCTTGGCGGCGAGAAAGCCATCCAGTTTACTTTGCA
GGGCTTGTCACCTTACCAGATAAAAGTGCTCATCATTGGAAAAatttaattgt
cgaactgaatttctacgggtagggagggcgttttcccaaggcagcttgagcatgagcttttagcagcccgctggc
acttggcgtacacaaagtggcctctggcctgcacacattccacatccacgggtaggcgcacacggctccgttctttggt
ggcccttgcggccaccttctactctctcccttagtcaggaaagtccccccggcccgancctggctgctgtaggagcgtg
acaaatggaaatagcagctctcactagctctgctgcagatggacaaagcagctgagcaatggagcgggtaggcctttggg
gcagcggccaaatagcagctttgtctcttgccttcttgggtcagaggctggnaaggggtgggtccggggcgggctcag
ggcgggtcagggcgggcgggcgggcgccgaaggctcctccggagggcccgccattctgcacgcttcaaaagcgacgt
ctggcggctgttctctctctctctctccgggttttgcacctgcatctctagatctcagcagctgaagcttaccatga
ccgagtaaaagcccaaggctgcgcttgcacacccgcagcagctcccccggggcggtacgcaaccctgcggcgcggttgc
ccgactaccccgcaagcgccacacccgtgcacccggacggccacatcgagcgggtcaecgagctgcagaaactcttct
cagcggctgggtctgcacatggcaaggctgtgggtgcgggacgagcgccggctggcggtctggacacgctg
gagcgttcgaagcgggcggtgttgcggagctggcccgccgcatggcgggttgagcgggttcaggctggcgc
gcagcaacagctgggtgggtcttgcggcgcccgcccgcccaaggagcccggtgggttcttggccacagctgggc
gtcttgcggcgccacccgggcaagggtctggcaagcgcggtctgtctccccgggtggagggcgccgagcgcgcg
gggtgcgggttcttgggtgacttgcggcccgacacctcccttctacgagcggtgggttcaacgttccggagac
gtcgggttcccgaaaggacggcgacctgggtgcattgacccgcaagccgggtgcctgcggcccgcccgacccgca
ggccggacccgaaggagcgacgaacccatgcattgattggcactgggcaggttaagtcaagggttagdGCCGC
TAACCTGGTTGCTGACTAATTGAGATGCATGCTTTGCATACTTCTGCCTGCT
GGGGAGCCTGGGGACTTTCCACACCCTAACTGACACACATTCCACAGCTGG
TTCTTTCCGCCTCAGAAGGTACACAGGCGAAATTGTAAGCGTTAATATTT
GTTAAAATTTCGCGTTAAATTTTGTAAATCAGCTCATTTTTTAACCAATAG
GCCGAAATCGGCAAAATCCCTTATAAATCAAAAGAATAGACCGAGATAGG
GTTGAGTGTTGTTCCAGTTTGGAAACAAGAGTCCACTATTAAAGAACGTGGA
CTCCAACGTCAAAGGGCGAAAAACCGTCTATCAGGGCGATGGCCAC

FIG. 37C.

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